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★ Editorial ★

William Hunter

AMONG the rather frequent instances where it appears that neither heredity nor environment has been potent in shaping the character of siblings, few are more outstanding (because of the fame that later came to the two persons involved) than the case of the illustrious Hunter brothers, who were the ornaments of British surgery in the eighteenth century, and are landmarks of medical history to this day, and will be for centuries in the future.

John (see CLIN. MED. & SURG., June, 1930, page 409), the younger and better known of the two, who is credited with "making surgeons gentlemen," was certainly no gentleman himself, but a roistering, choleric, incorrigible man, coarse of speech and with little formal education; while William was a "fastidious fine gentleman," whose courtly manners and cultivated taste were a considerable factor in his great professional popularity. One outstanding trait they had in common—a passionate devotion to surgery and to science in general.

William, one of earlier members of a family of ten, was born in Lanarkshire, Scotland, May 23, 1718 (ten years before John), and was educated at Glasgow University; studied medicine under William Cullen, at Hamilton, for three years; and then went back to the University and later to St. George's Hospital, London, to round out his professional preparation.

Following the example of two of his London teachers, Smellie and Douglas, he started, in 1746, a course of lectures and demonstrations on dissecting, operative surgery, and bandaging, and soon acquired a reputation as an unusually able teacher, being both simple and profound; meticulous but entertaining. It was to this private school that his short, stocky, red-headed brother came for instruction, in 1748.

With his gracious elegance, deep sagacity, and profound professional scholarship, William soon developed a large and lucrative practice. As time went on, he gradually gave up the active practice of surgery, and eventually became the leading consultant and obstetrician in London.

In 1768, he built the famous anatomic theater and museum in Great Windmill Street, where he established his large collection of anatomic and pathologic specimens, ancient coins and medals, and other curios, which, after his death, was bequeathed to the city of Glasgow, with a museum to house it—a princely gift, valued at half a million dollars!

In contrast to his lavish public generosity, William Hunter's private life showed forth his Scottish frugality and tenacity of purpose. He never married; had no country house, in spite of his wealth; labored with ardor and austere devotion until he dropped; and lectured when he was dying.

In relation to his colleagues, he was jealous, sensitive, highstrung, and embittered his own life with useless controversies with contemporaries who were far beneath him in professional attainments.

William Hunter's greatest work, representing thirty years of labor and an immense sum of money, was his monumental atlas of the pregnant uterus, illustrated by Riemsdijk and published in London in 1774. He also wrote a number of other papers of permanent value, chiefly on anatomic and obstetric subjects. He was the discoverer of the decidua reflexa; the first to describe arteriovenous aneurysm and retroversion of the uterus; and one of the first to recommend the tapping of ovarian cysts. Unlike his teacher, Smellie, he opposed the use of forceps in delivery.

Worn out with herculean labors, he passed to his long rest in London, in 1783, remarking on his deathbed, to his friend Dr. Combe, "If I had the strength to hold a pen, I would write down what an easy, truly pleasant thing it is to die."

The fame of John Hunter, well deserved as it is, has too long and too completely overshadowed that of his scholarly, cultured, highly endowed, and professionally successful brother, who should be far better known to the medical men of this generation.

The reverence of a man's self is, next to religion, the chiefest bridle of all vices.—LORD VERULAM.

Revitalization

THE TERM, rejuvenation, has been so freely and so loosely used, of late, that a good many physicians are coming to consider it a joke. It has even been spread all over the newspapers, in connection with lurid stories of weird operations, so that, when the wise layman hears it he winks and says, "I know—monkey glands."

This type of undesirable publicity is, perhaps, inseparable from modern journalism, but its results have been deplorable because, in the wholesale condemnation of indefensible and quackish methods, some procedures which appear to be decidedly useful have been thrown overboard along with the professional rubbish.

Rejuvenation implies that the individual is restored to the status of youth or is actually made younger. If this happened, he would make a fresh start from his new point of departure and live out the rest of

his life from his new age point—consequently living longer. Modern medicine and surgery seem to have been no more successful in bringing about such a result than were the investigations of the ancient alchemists or the explorations of Ponce de Leon. Hygiene and sanitation have, indeed, lengthened the *average* life considerably (chiefly by reducing infant mortality); but the man of sixty-five or seventy has little greater life expectancy than his great-grandfather had at the same age.

If, then, we are unable definitely to lengthen the life of the man who has passed his prime, is there nothing to be done for him?

By no means! The later years of a man's life should be the most fruitful years, because he brings to bear upon his problems a larger fund of experience and a ripened judgment. That they are not always so is due, in large measure, to the fact that his physical organs—especially the endocrine glands—have deteriorated to the point where they are unsatisfactory vehicles for the expression of his mature intellect. If we are able to revitalize a man's body, so that his later years, while no longer, will be *more active*, we will perform a vast service to the man and to humanity in general.

There now seems reasonably sound evidence to the effect that such restoration of vitality is possible, in men, by the ligation and partial resection of the vas deferens (known as the Steinach operation), and in women, by exposing the ovaries to mild doses of x-rays or, possibly, to heat, by means of diathermy.

The clinical evidence of the favorable results of these procedures is now so ample that it cannot be overlooked. At a Congress on Sexology, in Berlin (a report of which appeared in this journal for May, 1927), the work of Steinach received full recognition, even by his most bitter opponents, and those who have followed his methods in this country (notably Dr. Harry Benjamin, of New York) have given us a rather large literature in our own medical periodicals, which is available for study by all who are interested.

The effects of vasoligation or the exposure of the gonads to x-rays seems to be a revivification of the interstitial tissues of those organs (sometimes known as the puberty glands), with resulting stimulation of the entire endocrine system and a consequent, more or less complete, restora-

tion of the mental and physical powers formerly possessed by the individual. Contrary to the general belief, a marked return of sexual desire and ability is not at all a regular occurrence (though it sometimes happens), the change in the general physical vitality being the most common and notable result.

X-rays, except in the hands of highly trained roentgenologists, are by no means free from danger. Diathermy, which may prove to be more or less effective, is safer. No ill results from the Steinach operation have been reported, even in cases where it did no good. Gland transplantation must still be considered as being in the experimental and controversial stage.

It appears that the time has come for the medical profession to discard the doubtful word, rejuvenation, as applied to the results of medical or surgical procedures, and adopt the sounder and more defensible term, *revitalization*, thus removing our activities from the popular domain of charlatanry.

It has long been known that elderly persons could be given a new lease of life by changing their entire surroundings and outlook or by giving them new interests and purposes. Such individuals, under such circumstances, will frequently gain weight and appear many years younger than they did before. They may, indeed, actually live longer, and so justify the statement that they have been rejuvenated.

Unfortunately, it is difficult and often impossible to give the jaded and prematurely old man or woman a new world in which to live. If, however, by some relatively simple and comparatively harmless procedure, we are able to revivify his flagging physical forces, so that his zest in life and powers of accomplishment are, to a certain degree, restored, his outlook may be so altered that his old world appears new. Are we justified in withholding such assistance?

As matters now stand, we believe that every physician should familiarize himself with the work which has been done in connection with revitalization and, if the evidence seems convincing, should immediately qualify himself to carry out the necessary procedures or to recommend to his patients someone who is capable of doing so.

Do not consider anything for your interest which makes you break your word, quit your modesty, or inclines you to any practice which will not bear the light or permit you to look the world in the face.—
MARCUS ANTONIUS.

Repairing the Unemployed

IT WOULD SEEM fairly obvious, if one stops to think about it, that many people are unemployed because they have some physical disability which prevents them from working at the only job for which they have prepared themselves, and, further, that if they could be given adequate and intelligent medical attention these disabilities could be removed.

Our politicians have, however, been so busy exploiting the possibilities of vote-buying which our present American dole system provides for them, that little or no thinking has been done about the matter until West Virginia, under the stimulus of Dr. J. W. Savage, secretary of the State Medical Association, with the help of C. W. Ritter, of the State Compensation Department, conducted some experiments and made some discoveries.

It was found that out of 18,000 unemployed who were examined, 7,800 (nearly half) needed some kind of medical attention; and that the average cost of putting these human derelicts in working order (the physicians agreed to cut their ordinary fees in half) would be \$120, while the average cost of their "relief" was \$230 a year. Since this showed a paper profit to the State, the relief officials dubiously and grudgingly agreed to let the agitators have \$1,000 to try out their plan.

Ten unemployed men were selected for the experiment, and when they were all fixed up, nine of them promptly found paying jobs, so that they went off the "relief" lists. The State saved the cost of this repair work in the first five months, and thereafter the saving was all "velvet." The physicians who did the work received at least some money for their efforts. The "guinea pigs" were delighted.

After some more experimenting, with the cordial cooperation of the State Medical Association and with comparable results, the upshot is that the newly organized Physical Rehabilitation Department is now receiving a grant of \$50,000 a month for its work, and if matters continue as they have been going so far, and only 60 percent of the mended ones find private jobs promptly (which, based upon results up to now, is a truly conservative figure), the state will have a clear profit, at the end of the first year, of \$90,000.

If the officials of any State Medical Society sometimes wonder what they are for

(besides personal politics), here seems to be a worthy piece of work for them to tackle—a job which will be a real public benefit and increase their prestige, at no cost to themselves except the expenditure of a moderate amount of energy, time, and thought. The West Virginia brethren will probably be glad to give details of their accomplishment to any who yearn to do a piece of real, constructive pioneering, for the sake of themselves, their professional confreres, and the people in general.

If the leaders seem indisposed to undertake this work, it will be up to the members who approve of it to put a burr under their saddles or to get a set of officials who have more public spirit.

We have committed the Golden Rule to memory; let us now commit it to life.—
EDWIN MARKHAM.

Educate Your Patients on State Medicine

THE PHYSICIANS of this country have heard a good deal about the evils of State or Socialized Medicine, and the vast majority of them *don't want it*. But how about your patients? They're the ones that will be hit hardest, if it comes; and they're the ones whose pressure on their congressmen can *keep it out*. How well do they realize what such a system would mean to *them*? *Not enough*, you may be sure; and you are the one to educate them along this line.

Such an educational program is being made easy for you to carry out, by means

of a brief, pertinent folder, written in layman's language and telling your patients what State Medicine would mean to them, *personally*.

If every physician in the country, or even a considerable majority of them (those who

see and sense the evils of such a system and are opposed to it), would place one of these folders in the hands of every one of his patients and personal lay friends, a howl of protest would go up which would reach even the ears of the congressmen (most of whom are pretty well deafened to the voice of their constituents, by the noise of political propaganda and the shrill whispers of the log-rollers and pork-barrel devotees) which would make them *afraid* to foist any such scheme on the American public, *no matter what political interests might demand it*.

If you are willing to take a small chance on our sayso, send twenty-five cents to *Medical Economics*, Rutherford, New Jersey, for fifty of these folders. Just place them in your waiting room, where

your patients can help themselves. You might mail copies, with statements or alone, to those who do not come in frequently, and hand them to those lay friends who are not patients. When the supply is gone, order some more.

If you are a disciple of Saint Thomas, or hail from Missouri, send these people a three-cent stamp for a copy, look it over carefully, and let your conscience be your guide.

NEXT MONTH

Dr. R. S. Hubbs, of Sheridan, Wyo., will discuss the advantages, dangers, and technic of spinal anesthesia in a highly practical manner.

A. J. D. Cameron and J. H. Thompson, of Tunbridge Wells, England, will present an interesting outline of the part played by the autonomic nervous system in asthma.

Dr. Elias Lincoln Stern, of New York City, will report a case of poliomyelitis, treated by intraspinal injections of vitamins B and C, and discuss the method briefly.

COMING SOON

"Essential Thrombocytopenic Purpura, with a Report of a Case," by W. E. B. Hall, M.D., St. Joseph, Mo.

"Personal Suggestions to Physicians," By Floyd Burrows, M.D., Syracuse, N. Y.

★ *Leading Articles* ★

Histamine Phosphate in Manic-depressive Psychosis

(Further Observations and a Case Report)

By WALLACE MARSHALL, M. D., Appleton, Wis.

THIS PAPER is being presented for several reasons: It constitutes the first observations on the use of histamine phosphate in a case from private practice and in an ambulatory state; furthermore, the patient was only fifteen years old when she became afflicted by psychopathic behavior. Details of the case are complete, and she has been observed many times by various psychiatrists, who have recorded their opinions.

Manic-depressive reactions are rather rare in children, according to Strecker¹. It is gratifying that the present therapy apparently has caused a temporary remission of symptoms in this case, as the prognosis heretofore has been rather bad. More definite information will be available when other observers have had an opportunity to evaluate the treatment prescribed herein. For these reasons I deem that the publication of this paper is advisable at this time. In a preliminary paper², Marshall and Tarwater are reporting that histamine phosphate improved a large enough percentage of 35 unselected cases so that further investigation is indicated.

It is interesting to note that other methods are producing definite results in psychotic cases, with more drastic procedures. Insulin therapy, as introduced by Sakel, and Metrazol injections, as are being followed closely by Emerick Friedman³, are worthy of note. However, such methods require that the patient be kept under constant observation by the attending staff, as these patients become very ill with such procedures.

It is worthy of mention that the histamine phosphate technic is simple to administer, and such a method does not place the patient in danger. The patients remain up and about during the course of the treatment. To date, no untoward reactions have occurred during the treatment of our series of 36 cases.

Pharmacology of Histamine Phosphate

Histamine phosphate reacts differently in various species of animals. It is a stimulator of the automatic nervous system and

causes vasodilatation of the cerebral blood vessels, so that a marked blushing of the face is noted a few minutes after injection of the drug. Patients state that they experience a metallic taste and that they salivate after its administration. At times they may complain of transitory frontal or occipital headaches, which are dull in nature. At times patients complain of temporary dizziness. Such complaints last but fifteen minutes.

Openchowski⁴ states that the drug accelerates the contractions of the heart and tends to accentuate its murmurs, if present. He adds that histamine increases gastric motility and provokes contraction and evacuation of the gallbladder. We have noted that many patients become hungry after the injections. This symptom may be due to stomach contractions. Transient hypoglycemia and adrenalinemia have been reported by Openchowski. Myosis is observed many times.

We have observed that leukocytosis was present in a limited number of experiments on dogs. This is an interesting observation, as patients under insulin therapy, by Sakel's method, have exhibited leukopenia, which was followed by a leukocytosis. We have not investigated this phase of the problem as yet with histamine, but we are impressed that the action of histamine resembles that of insulin. We have observed that histamine improves the tone of the skin and tends to clear up acne vulgaris, as Bernard Wortis reported previously with insulin therapy in schizophrenics. Furthermore, we have noted a temporary improvement in hearing and in sight in a few cases who have had histamine administered to them.

Some observers have recorded an improvement in psychotic patients who had been burned accidentally. Improvement has been reported in cases which have been submitted to surgical procedures. In such cases, histamine may have been liberated from the traumatized areas of tissue. Herein may lie the physiologic answer to the improvement which has been recorded re-

peatedly in neurotic cases which have undergone surgical operations. Suggestions may play only a minor part in the improvement which sometimes follows such procedures.

Blood Chemistry and Immunologic Studies

The resting and the wandering cells of the reticulo-endothelial system may help considerably, by ascertaining their rôle in the improvement which follows in cases of trauma to psychotic patients. The white blood cells, the precipitins, agglutinins, etc., may supply more pertinent information for the researcher than do studies in blood chemistry. Perhaps the blood chlorides, non-protein nitrogen, blood sugar levels, etc., will give way to more detailed immunologic observations in the future.

I have attempted to show the importance of the immunologic aspects of the problem of mental disease as presented in the theory of psychoallergy³, and elaborated upon in subsequent papers^{6, 7, 8, 9}.

Brain tissue possesses the properties of most living tissue elsewhere in the body, one such property being that of sensitivity. If we make use of the psychoallergic concept that afferent stimulations may be antigenic in character to the brain cell substance (the neurokyme), then excerpts from Kahn's recent book on immunity¹⁰ may shed additional light on the subject of psychopathology.

Kahn writes: "The outstanding disturbance with the allergic person . . . is that his tissue cells respond immunologically to substances that are not antigenic to normal persons. Stated differently, his tissue cells are immunologically hyperactive. This specific hyperimmunity may manifest itself in innumerable ways, depending upon the extent of the allergic disturbance. The allergic person may react immunologically to drugs or other organic substances; he may react on first contact with an allergic agent, in the absence of an incubation period; he may react nonspecifically, and most frequently he will give maximal reactions to minimal doses of the allergen . . . Repeated injections of antigen increase immunity; when excessive they decrease immunity, possibly through the production of immunologic fatigue."

The recent research on electroencephalograms may lead eventually to a better understanding of these neurokymal changes which I have mentioned and which occur, probably, because of the afferent stimulations, which may be capable of causing specific hypersensitizing processes to be established in the nerve cells. Herein may lie the crux of mental disease.

Dosage of Histamine Phosphate

Human beings seem to be capable of de-

veloping a tolerance to histamine; consequently, I decided to employ the medication in increasing doses. I was not concerned particularly as to how much histamine a man could tolerate, for I was reasonably assured, by experimentation with dogs, that the lethal dose would not be reached in our therapeutic limits. My assistants* reported that the dogs had tolerated 3.5 cc. of a 1:1,000 solution of the drug in one dose. The animals seemed to experience pain at the site of the injection.†

The first dose of the drug was 0.1 cc. and was administered intracutaneously in this present case. The other injections were given subcutaneously on every other day, in alternating arms, and the dose was increased 0.1 cc. at each treatment until 1.0 cc. had been administered. This made 10 treatments in all.

There are no definite facts about what length of time the patients will remain in a period of remission; nor have I any advice to offer concerning a maintenance dose; I feel that this may be advisable in some cases. Additional findings will aid in the solution of this phase of the subject.

Case Report

D. R. became ill suddenly the day after Thanksgiving, in 1934. She was fifteen years of age at the time. She became overactive and violent, refused to go to bed, and struck at her mother and other persons in the house. She became nauseated and vomited intermittently for two days, but then became rational. Four days later, she began to cry, for no apparent reason, and became so weak physically that she had to remain in bed for two weeks. Thereupon, she began to gain in strength and was allowed to be up and about, but she mumbled continuously and could not be quieted. At other times, she would "sneak about" and hide from people. She refused to eat and sleep for several days at a time. She told her mother that she had been in heaven and had seen her sister (who is dead) and had talked with God.

After the Christmas holidays of 1934, she regained her normal mental state and reentered a school for the deaf.

In May, 1935, she became overactive once more, would not cooperate, acted silly at times, and attempted to pick flowers off the wallpaper and the rugs at home. She was ugly and would strike at everyone who approached her. She did not sleep for four nights and remained in a manic state for six weeks, during which time she attempted to choke several of the smaller children. She was untidy and unruly during the entire period. Then she became rational

*Messrs. Lee Hall and Hobson Menasco assisted me materially in the experiments with the dogs. This portion of the present research was performed in the Dept. of Medicine at the University of Alabama.

†Histamine phosphate, 1:1,000 solution, was furnished through the courtesy of Dr. E. A. Sharp, director of experimental medicine, Parke, Davis and Company, Detroit, Mich.

again for two weeks, but was weak and quiet. At times she was almost catatonic in her actions.

In September, 1935, she exhibited her previous tendencies towards overactivity and showed marked emotional instability, which persisted up to the time she entered a psychiatric institute. There, a diagnosis was made of deaf-mutism with psychosis following the manic-depressive type. She remained there for about two months, but did not show much improvement.

From that time until August, 1936, she remained at home in a more or less stationary lethargic condition, but then exhibited a very bad spell of vomiting, extreme weakness and negativism, and finally one day climbed out of bed, picked up the baby's crib, and actually threw it from one end of the room to the other. She was taken immediately to another mental hospital, where she remained until February, 1937, without much improvement, with the exception that she became more quiet.

Returned to her home again, she was exceedingly stubborn, "poky" in her actions, would go about with food in her mouth which she had taken several hours previously, and would stand in a place for a long time, apparently in a stupor. She could not sleep during the nights, would make foolish grimaces, refused to speak to anyone, and would strike anyone who came near her. On May 20, 1937, she gazed from her window during the entire night, refused food, and at times would expose herself to others in the house. Her mother had learned to regard this type of behavior as the prodromal signs of an oncoming manic state, which would take about two weeks to develop. This state became progressively worse until I began histamine therapy.

Past illnesses: The patient was apparently normal at the age of 5 months, when she suffered from an attack of influenza and pneumonia, during which she became deaf. She had whooping cough at the age of 6 years, and measles a year later. She learned to read lips and reached the eighth grade of a school for the deaf before she became irrational. There were no other illnesses, no accidents, no operations. Her teacher claimed that she was quite bright in her studies. She was the leader in most athletic games and contests until she became mentally ill.

Family history: Her mother, age 42, is living and well, as is the father, age 47. The patient has 2 brothers living and well. None are dead. There are 2 sisters living and well. One sister died in the first year of life from pneumonia. There is no history of any nervous or mental disorder in the family, which appears to be entirely free of any hereditary disease.

Physical examination: The patient has been submitted repeatedly to complete examinations. All findings have been within normal limits. All systems appeared to be healthy. The blood-sugar and nonprotein-nitrogen determinations, blood counts, blood cultures, urinalysis studies, and blood Wassermann tests have been normal.

Previous types of therapy: The patient has received the following medications at various times during the course of her illness: Theelin, 200 units hypodermically; whole ovary extract, hypodermically and by mouth; hyoscine hydrobromide by mouth; halibut liver oil in capsules; Sistomensin hypodermically; tincture of opium and dilute hydrochloric acid by mouth; Amytal by mouth; phenobarbital by mouth; and thyroid extract by mouth. Only hyoscine hydrobromide and phenobarbital seemed to bring results, and these served only to quiet the patient during the intense manic phases.

Notes on Histamine Phosphate Therapy

June 3, 1937 (first visit): The patient was in bed; was looking out of the window by her bedside all night; paid no attention to anyone.

She was given 0.1 cc. of histamine phosphate, 1:1,000 solution, intracutaneously, at 10 A.M. Her face flushed in few minutes and she began to look around the room and talked to her mother; seemed to brighten up. At 2 P.M. she said she was hungry, and after eating she rested quietly. At 8 P.M. a sudden change was noted; the patient pulled her hair, struck at herself, and tore the bedclothing. She went to sleep at 10 P.M. and slept until noon the next day.

June 4, 1937: Woke at noon, got up and ate a light lunch; then sat quietly until 4 P.M., when she became violent again, struck at herself and made faces at the family. She did not talk to the family until 1:30 A.M., when her condition changed, she asked to brush her own hair, cleaned her teeth by herself, and retired.

June 5, 1937: Patient in bed; given 0.2 cc. of histamine, 1:1,000 solution, subcutaneously; became hungry half an hour later and asked for food; slept most of the day and until noon next day.

June 6, 1937: Woke at noon, asked for food, and ate heartily; felt fine the rest of the afternoon, until 7 P.M., when she became cross, but did not strike at anyone.

June 7, 1937: Received the third dose of histamine phosphate, 1:1,000 solution, subcutaneously (0.3 cc.). At 7:30 P.M. she asked to see the doctor, and when the wish was not granted, she sputtered continuously. Her bowels were regular and she slept well every night. The next day she was quiet, ate a hearty supper, and felt well.

June 9, 1937: Received the fourth dose (0.4 cc.) of histamine phosphate 1:1,000 solution hypodermically; got up at 3:30 P.M.; put her hands on the radio; seemed to perceive music and began to dance; seemed happy. At 9:00 P.M. she said she was tired and went to bed alone. This was the first time she had undressed herself in three years.

June 10, 1937: Up at 10:30 A.M.; dressed herself alone; walked around outside of the house by herself; felt well all day, and was quiet and cheerful.

June 11, 1937: The fifth subcutaneous injection of histamine phosphate solution (0.5 cc.) was given. She insisted upon putting on great deal of powder and rouge; was quiet all day; and wiped the supper dishes without being asked to do so.

June 12, 1937: Up at 10:30 A. M. and dressed herself, but seemed nervous and confused; opened bureau drawers and took out everything; put things away; took them out again, many times.

June 13, 1937: Sixth hypodermic injection of histamine phosphate solution (0.6 cc.). Her parents noted that she seemed to hear when called and jumped at the table if one shouted at her back during dinner. She was quiet all day, smiled at times, and seemed amiable. The next day she was quiet and ate heartily.

June 15, 1937: Seventh dose of histamine (0.7 cc.) subcutaneously. She did not seem to have any ambition, but sat around quietly. She was taken to an otologist who found that she possessed bone conduction and the ear drums appeared normal on examination. The next day she had diarrhea and stayed in bed all day.

June 17, 1937: Eighth dose of histamine hypodermically (0.8 cc.). The patient appeared to be weak; had no appetite; and was in bed all day.

June 18, 1937: Up at 8:00 A. M.; was full of pep and looked in every nook and corner of the house, as though she had been asleep for years; read every letter in the house; straightened out her bureau drawers and asked to be taken to town.

June 19, 1937: Ninth injection of histamine hypodermically (0.9 cc.). She was very cross and vomited every time she ate. The next day conditions were the same.

June 21, 1937: Tenth and last injection of histamine phosphate, 1:1,000 solution (1.0 cc.), hypodermically. She was very cross today and vomited everything she ate. Her bowels were normal.

June 22, 1937: Straightened her clothes in clothes closet and brushed them over and over again. The next day, in the afternoon, she went to the refrigerator, made herself a sandwich, poured herself a glass of milk, and sat eating and reading the paper; went to bed in the evening without being told to do so.

June 25, 1937: Was out of bed early today; felt energetic and washed the breakfast dishes, cleaned cupboards, and made her bed without being told to do so; played with baby sister; had a good appetite and ate well; tried on her new dress; and appeared very happy. The next day she took care of the baby and sprinkled and ironed the family's clothes, without being told to do so.

During the next six days (to July 2) she began making a new dress for herself and for her baby sister and repaired her torn clothes; washed all the rugs for her

mother while she was shopping, and then swept the floor; was very energetic, happy, and rational; corrected her mother's spelling while mother was writing a letter; attended a movie with the family for two hours and enjoyed the picture very much; was questioned about her illness and replied that she knew she was sick but didn't remember anything.

Summary

I have presented a review of the pharmacologic action of histamine phosphate and have mentioned some possible newer methods of attack on the problem of mental disease. I have presented a case of manic-depressive psychosis of three years' duration, which has been treated with histamine phosphate. The results with this therapy are interesting enough to warrant their publication, so that other physicians may note their own findings with this method.

Attention has been called to the simplicity of the method, the apparent lack of danger to the patient, the ambulatory feature of the treatment, the inexpensive cost of the method, and the fact any capable physician can use it when and where he wishes.

It is necessary to emphasize that this is the thirty-sixth case which has been treated with this method by us. Our data are too limited in amount to draw any definite conclusions as to the real merit of our therapy, but it is hoped that other physicians will evaluate the advantages and the disadvantages of this procedure.

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Appleton Clinic.

PSYCHONEUROSES

We must distinguish between malingering (conscious fabrication of symptoms) and the psychoneuroses, where the fabrication is unconscious. The victim must conform to or compromise with public opinion. He may not violate his taboos unless he is ill. If all of our desires and ideals were noble, there would be no need for the neuroses, which arise from the conflict between man as a decent citizen, and man as merely a biped mammal.—DR. LOUIS CASAMAJOR.

Dynamic Ileus

(Report of Four Cases)

By E. J. MELVILLE, M. D., St. Petersburg, Fla.

BEFORE the era of aseptic surgery, the vast majority of acute abdominal conditions were loosely classified as "inflammation of the bowels," and were treated by posture, gastric and intestinal lavage, hot or cold packs, combined with the administration of enough laudanum to bring the respirations of the patient down to eight or ten to the minute.

In the early 1890's, recent graduates considered this form of treatment old-fashioned, but twenty years later Ochsner became world-famous by his thesis on the treatment of the suppurating appendix. In the main, it consisted of sitting the patient up in bed, lavage of the stomach, starvation, or at least intravenous or intrarectal alimentation, and administration of enough opium to bring the respirations and the intestinal functions to a minimum. Then, when the blood count showed that the patient's resistance was restored, he recommended that a stab wound be made, under local anesthesia, for drainage purposes, and waiting until later for the radical operation.

I spent my boyhood and early youth on an isolated island in the St. Lawrence River. My grandmother officiated as nurse, midwife, and physician to the entire community. I have seen her burn out old sores, ulcers, and skin cancers, by means of a soldering iron, heated in the kitchen stove. She then gave her patient an infusion of white oak bark, with instructions to keep the sore wet with it until healed.

As a young medico, I looked back on this treatment as barbarous, but thirty years later, I sat in the amphitheater of the Augustana Hospital, at Chicago, and saw this same treatment heralded as an innovation. As the French say: "The more a thing is new, the more it is the same thing."

I am not altogether satisfied with the expression, "dynamic ileus," as the duodenum, jejunum, or colon may at times be the seat of the trouble, but for the present, it will suffice, as I am endeavoring to describe a condition of paralysis of a certain section of the intestine, producing symptoms similar to those produced by a mechanical obstruction of the bowels.

The following typical cases came under my observation during the winters of 1935 and 1936:

Case Reports

Case 1: Mrs. S., aged 82, from East Sag-

inaw, Mich., had lost her right eye some years before, and now sought relief from a severe retinal hemorrhage in the left eye. The left eyeball and the surrounding tissues were red, swollen, and exquisitely tender. The patient was totally blind.

I called an oculist as a consultant, who concurred in my diagnosis and treatment, and in two weeks the eye cleared up, the pain lessened, and she could see fairly well. Then, like a bolt from the blue, she developed a severe pain four centimeters to the right and slightly below the umbilicus, with continuous regurgitation of the contents of the stomach and duodenum, followed by vomiting of fluid having the distinct color and odor of feces.

The patient was delirious, the fever high, and prostration and dehydration were extreme. The leukocyte count was 22,000; respiration and pulse, rapid and weak.

Feeling that death was imminent, her relatives went to an undertaker, picked out a casket, and even went so far as to have a grave dug for her in her home town.

However, there was an indefatigable nurse on the job, who washed out the stomach every 6 hours, leaving four ounces of castor oil in the stomach each time. Codeine and atropine were given to the point of tolerance, and later Pituitrin, for its action on the unstriated muscles. Hot packs were applied to the abdomen, and a rectal drip of nutrient fluids was given, with small doses of laudanum to maintain the rectal tolerance.

The condition of the patient did not change materially for about twelve days, when the bowels began to move freely, and for four days she passed large quantities of feces. Later she was taken north by her relatives and placed in a nursing home. I received a letter from her in August, 1936, discussing the advisability of spending the winter in our city, but I answered discouraging any further travel on her part.

This case was too strenuous for repetition, yet I was consoled by the fact that I was the only local physician who had an empty casket in St. Petersburg and an empty grave in Michigan.

Case 2: Mrs. F., age 84, consulted me on December 4, 1935, complaining of purulent cystitis and increased frequency of urination. Examination disclosed that the tissues surrounding the bladder, uterus, and rectum were woody-hard, especially in and about Douglas' pouch. I washed the bladder with boric acid solution, and later with a weak solution of permanganate of potassium, and after ten days the patient was much relieved.

Two weeks later I was called to her apartment and found her suffering from

acute abdominal pain, centering to the right of and slightly below the umbilicus. The abdomen was distended; fever, pulse, and respirations were high.

The patient was admitted to St. Anthony's Hospital, with a tentative diagnosis of intestinal obstruction, vomiting constantly the contents of the stomach and duodenum. Fecal matter began to be regurgitated on the third day. Prostration and dehydration were extreme. The patient was gravely ill. X-Rays showed obstruction below and to the right of the umbilicus, probably jejunal. Rectal examination revealed much induration in the anterior wall, but no marked obstruction.

My consultants were divided as to what procedure to follow. The medical men and the radiologist advised surgery. The surgeon, on account of the serious inroads made by the carcinoma, advised conservatism. The patient absolutely refused operation, and my opinion coincided with hers.

This patient was treated along the same lines outlined in Case 1, and her bowels began to move after an interval of about 10 days. She left for her home in Detroit, in charge of a nurse, January 28, 1936. She later died of a general carcinoma of the lower pelvis, but with no return of the obstruction.

Case 3: Miss R. A., 76 years old, came to my office complaining of severe, colicky pains in her mid-abdomen and lower pelvis. Examination revealed much tympanites and tumefaction of the abdomen, with vermicular movements above and about the umbilicus. There was no pathosis of the uterus, bladder, nor rectum. The heart and lungs were normal, except for a high degree of arteriosclerosis. She had incipient cataracts in both eyes.

I advised rest in bed, an easily assimilable diet, high colonic irrigations, and stomach sedatives. Under this regime she grew worse rapidly, and was admitted to the Mound Park Hospital, March 12, 1936, with a tentative diagnosis of complete intestinal obstruction.

All vermicular movements had ceased by that time, and the patient exhibited the classic "silent belly," so often spoken of by the late Dr. John B. Deaver, of Philadelphia. Her leukocyte count was 32,000; pulse, rapid and thready; temperature, 102° F.; vomiting was continuous and dehydration extreme, partly due to exhausting sweats. The consulting surgeon advised against operation, on account of the poor condition of the patient.

High colonic irrigations were given at intervals of 4 hours, not only for their eliminative effects but also to combat dehydration. Dextrose, intravenously, and nutrient rectal enemas were also used freely. Codeine sulphate was given to relieve pain, and Pilitrin for its effect on unstripped muscular fiber.

However, I believe that the life-saving measure was, as in all these cases, the continuous lavage of the stomach every 6 hours, day and night, and leaving four ounces of castor oil in the stomach each time. When

the bowels began to function, globules of the oil were found in the discharges, showing that the oil not only had a cathartic action, but also served well as a lubricant.

The treatment described was continued ceaselessly, in spite of the fact that the patient was almost moribund, for ten days. Then the bowels began to move and, in a few days, she began to ask for solid food. She left the hospital in a week and has had no return of the obstruction, perhaps on account of the fact that she has been on a regulated diet and has daily doses of mineral oil.

Case 4: I was called to see Mr. A. G., aged 80, on April 10, 1936. He gave a history of colicky pains throughout the abdomen for the past 8 days, relieved by the passage of a moderate amount of gas and ribbon-like stools. On April 12, the obstruction was complete and the patient began to vomit constantly, at first the contents of the stomach and duodenum, followed, on April 14, by fecal vomiting.

For the first two days, vermicular movements could be plainly seen and felt above and to the right of the umbilicus but, on April 14, no further movement was discernable until the bowels again resumed their function.

Mr. G. became very much emaciated and dehydrated, in spite of rectal retention enemas of sodium bicarbonate solution and intravenous injections of dextrose. The leukocyte count was 22,000. No signs of disease were found in any of his organs, except a high degree of arteriosclerosis, incidental to his age.

A Murphy drip of a concentrated beef solution, with the addition of a few drops of laudanum, was well retained by the rectum. The stomach was washed out every 6 hours, leaving in it about 4 ounces of castor oil each time. One-half (0.5) cc. of Pilitrin was given every 8 hours, for its action on unstripped muscle, but whether it did any good was problematical.

The vomiting in this case, and in fact in all my cases, was regurgitant. The patient merely leaned over the basin and the fluid poured out of his mouth with scarcely any effort.

For ten days the patient's illness pursued a stormy course, but on the eleventh day his bowels began to move, and a few days thereafter he was convalescent. His recovery was uneventful and, up to the present time, he has had no return of the obstruction.

Summary

During fifty years of medical study and practice, I have seen many cases similar to those just described. Eighty (80) percent of them have recovered under medical treatment.

Since the advent of asepsis, surgery has stepped in, with disastrous results.

All of my cases have been in old people with a high degree of arteriosclerosis, indicated by incipient cataracts and other sclerotic conditions.

All have had the same classical symptoms:

high leukocytosis; pain over the abdomen; vermicular movements above the obstruction, followed by Deaver's "silent belly."

Even when vomiting is persistent and excessive, lavage of the stomach yields quarts of greenish fluid with a fecal odor. This is, of course, caused by a regurgitation of the intestinal contents into the stomach, due to reversed peristalsis.

Emesis is always effortless and consists of a regurgitation from an overfilled viscus.

In several cases, I have used different solutions, intravenously and intramuscularly, with no very definite results.

Dynamic ileus is a medical disease, and must be carefully differentiated from torsions, intussusceptions, extrinsic and intrinsic obstructions from fecaliths and neoplasms, and other well-known conditions, loosely classified as "acute abdomen."

The word, ileus, is derived from the Greek

eilein (to twist). However, the condition I am endeavoring to describe is not a twist, but a collapse or flattening of the bowel, and may occur in the ileum, the jejunum, or the colon. It is caused by a paralysis of the muscular coats of the bowel, and may be local or cerebral. The paralyzed bowel may be analogous to a paralyzed arm or leg in ordinary apoplexy, or to heart block in coronary thrombosis. On the other hand, it may be caused by the pressure of a clot from one of the branches of the mesenteric or celiac axis arteries.

In conclusion, I again wish to sound a note of warning to medical men, that it is a mistake to classify all cases of intestinal obstruction as surgical. Such cases are a poor surgical risk, as the added shock of an operation may be the one factor that destroys the last margin of safety for the patient.

335 Third Avenue, North.

The Preoperative Treatment of Exophthalmic Goiter

By LINDON SEED, M. S., M. D., F. A. C. S., Chicago

BEFORE OPERATION, a patient with an exophthalmic goiter needs: (1) iodine; (2) food; and (3) rest. There is little else of value. The preoperative treatment, then, becomes exceedingly simple. Indeed, it is so simple that the more pedantic physician has great difficulty in restraining himself and must complicate it with much that is extraneous, surround it with mystery, and decorate it with gilt, so that it will more nearly reflect his own erudition.

Iodine

Iodine invariably moderates the symptoms of exophthalmic goiter. In from three to seven days after the beginning of its administration the symptoms lessen in severity. The rate of improvement is relatively rapid for the first few weeks, and then the symptoms, which are milder than formerly, remain at a stationary level. Although the iodine constantly exerts a beneficial influence, it can rarely cure the disease, so at some unpredictable time there is a recrudescence. On an average, the maximum amount of improvement will be obtained in from three to four weeks; however, no one can prophesy with certainty how an exophthalmic goiter will react to iodine, how much of a remission will be obtained, when it will reach a maximum, and how long it will last. The answer to these questions can be obtained only by observing the individual case.

It is obviously foolish, then, to establish any set number of days or weeks of preoperative treatment. There has been a tendency to recommend only from seven to ten days of iodination. This recommendation has been based upon two erroneous theories: (1) that the maximum improvement is obtained in ten days; and (2) that, after ten days, an exacerbation may easily occur. The first of these statements may be correct in many instances; the second is not correct. On the other hand, if iodine is given to a person with a toxic nodular goiter (toxic adenoma), improvement is obtained in only a small percentage of cases, and in another small percentage the symptoms are made worse. The use of iodine is of no benefit in preparing a person with a toxic nodular goiter for operation or in reducing the mortality rate.

Although there are criteria enabling one to distinguish between a toxic nodular goiter and a toxic diffuse goiter, they are by no means infallible. For a while I gave no iodine to patients with toxic nodular goiter and operated upon approximately 200 consecutive patients with this condition, without a death. Finally a mistake was made: An exophthalmic goiter was called a toxic nodular goiter; no iodine was given; a severe crisis developed; and the patient died in thirty-six hours after operation. Since the toxicity of a toxic nodular goiter is not augmented by iodination over a short period

(from seven to ten days), there is no reason why one should not give iodine for a short time in order to avoid such a catastrophe.

One can, then, establish two general rules:

(1) Iodine should be given to a patient with an exophthalmic goiter (toxic diffuse goiter) until one has satisfied oneself that the maximum degree of improvement has occurred (this will usually be in from three to four weeks); (2) iodine should be given to a patient with a toxic adenoma (toxic nodular goiter) for only from seven to ten days preceding the operation.

Iodine is almost universally administered as compound solution of iodine (Lugol's solution), in doses of 10 drops in milk three times a day. Lugol's solution is a 5-percent solution of free iodine in a 10-percent solution of potassium iodide. It was chosen by Plummer because it was the simplest and most stable preparation of iodine, and has been accepted by most clinicians. Any other form of iodine, organic or inorganic, is equally efficacious, as apparently the gastrointestinal tract absorbs, and the organism utilizes, any form of iodine. When Lugol's solution is added to milk, an albuminate is formed which obscures the taste. If this treatment is continued over long periods, many patients acquire a distaste for milk; in that case the medicament can be given in grape juice, in orange juice, or even in a gelatin capsule. Among the many forms of iodine that may be substituted, one of the most tasteless and least irritating is Lipo-iodine tablets, which contain $4\frac{1}{2}$ grains (0.3 Gm.) of ethyl di-iodobromide—more iodine than is contained in 10 drops of Lugol's solution.

The standard dose of Lugol's solution is 10 drops three times a day. This is unquestionably a tremendous overdose, but that figure was set by Plummer so that every eventuality would be covered. In what manner iodine improves an early exophthalmic goiter is not known. The quantity needed varies enormously. However, one can safely say that any dose over 10 drops three times daily is unnecessary in even the most severe case. If troublesome acne or some other idiosyncrasy develops, the dose can be safely reduced to 5 drops two or three times a day.

Food

If a person's basal metabolic rate is 50 percent above normal, he requires 50 percent more food to maintain his weight. Concomitant with the elevation in the metabolism there is the usual restless activity, which uses more energy and requires still more fuel. In addition, the fuel is apparently burned in an inefficient manner. Thus, if one computes the total caloric requirement, it will be found to reach more nearly

a 100 percent addition than a 50 percent addition. One can then calculate the required daily number of calories—3,500, 4,000 or 5,000, as the case may be—and arrange a commensurate diet. Theoretically, the problem is not involved, and the solution is easy. If the patient eats the prescribed diet the problem is solved. Sometimes he does; more often he does not.

If one sets out to make a person take in the largest possible number of calories, one will accomplish the purpose more easily and more efficiently by asking the patient to eat at each meal those foods which he likes best in as large quantities as he can. When asked to take an additional lunch between meals and before bedtime the patient will invariably remonstrate. If one countermands the additional lunches and asks the patient if he could drink a glass of orange juice and eat a few crackers at 10:30 A. M.; drink a glass of grape juice and eat a cookie or a small piece of cake at 3:30 P. M.; and have a glass of milk and an apple at bedtime, the patient readily assents!

Such a dietary regimen will be more successfully carried out at home than in a hospital. If the patient is in the hospital he will receive a high-caloric diet; sometimes a meat-free high-caloric diet. The latter is probably a mistake. Meat, if taken in large quantities, has a specific dynamic action in raising the basal metabolism. Theoretically, then, the intake of protein should be reduced so that the metabolism may not be unduly elevated. However, such elevation is of little import, and if the patient enjoys meat he should be allowed to have it by all means. The calories in the meat are a great deal more important than the trifling effect on the basal metabolic rate. Furthermore, a patient with marked loss of weight has hypoproteinemia and needs meat badly to replenish his body proteins. If the dietitian consults the patient concerning his likes and dislikes, the high-caloric diet will be successful; if the diet is the standard high-caloric diet, the patient will do better on a regimen of a full tray of food, in which he can order several helpings of those things he enjoys.

Rest

That rest is an essential part of the treatment of exophthalmic goiter there can be no doubt, but that absolute rest in bed does more harm than good there likewise can be no doubt.

One may consider, for example, the case of a woman with an exophthalmic goiter who presents herself at the physician's office. She has lost 20 pounds (9 Kg.) in weight, her pulse rate is 130, and her basal metabolic rate plus 60. She is weak, but has been able to be up and about the house

doing a part of her work. Absolute rest in bed is ordered. She complains bitterly about this ruling and insists that she will feel better out of bed; but complete rest is thought to be imperative. At the end of ten days she has quieted down; the pulse rate and the basal metabolic rate have decreased; her nervousness has improved, and it is thought that she is now ready for an operation. If at this point the physician will ask the patient to get out of bed, put on her slippers and dressing gown, and walk across the room, he will be chagrined to find that she can walk only a few steps; the exertion has caused her heart to beat at an alarming rate; she is breathless on the slightest exertion; her strength is gone, and she must be helped back into bed. In short, the weakness of disuse has developed—a bed disability so profound that she cannot sit up unaided in a chair for more than fifteen minutes. And yet, after the operation, she must return to bed in a sitting position, which she would have difficulty in maintaining even without an operation!

No matter what the other findings, loss of strength increases the risk of a thyroidectomy, for it is not so much the severity of the patient's reaction which determines her fate as her *resistance* to the reaction; and her powers of resistance are closely correlated with her bodily strength.

An adequate regimen is as follows: The patient goes to bed at 9 P. M., rises at 8 A. M., gets dressed and is up about the house. All work requiring much physical effort is interdicted. Performing a few trifling tasks will be more beneficial than harmful, in that it keeps the patient amused and contented. In the afternoon she goes to bed for two or three hours. It is important that she undress, put on her night clothes, and actually *go to bed*. If these instructions are not emphasized she will merely lie on the couch and more or less assume that she is resting in bed. She should go outdoors each day and may attend a motion picture show early in the evening, but social affairs, such as bridge parties and church gatherings, are contraindicated. If the heart is decompensated, of course she must remain in bed until there is no longer

any edema of the extremities, when she is allowed to be up a short while each day until she is up three or four hours daily—the minimum period before an operation. If she has been very ill and has been kept in bed many weeks, she should again be allowed to be up until she can, without weariness, be up and dressed for three or four hours a day, no matter if a month or more is required to accomplish this.

Mental rest is also important. One must always remember that, although a patient with goiter is nervous, she is *not neurotic*. She does not present a long list of vague symptoms which are subject to aggravation on little provocation. She is active, vivacious, and much inclined to overdo. Her activities must be restricted, but at the same time they must not be completely abolished. An uninteresting life of complete mental rest will produce a sharp discontent more harmful than overactivity.

Great confidence is placed in the use of sedative drugs. That they are helpful in some cases there is no doubt; that they are not absolutely necessary there is likewise no doubt. Large amounts of sedatives artificially obscure the nervous symptoms which may be of use in determining the degree of operability. Insomnia, when distressing, should be treated. The most uniformly successful drug for this purpose is a mixture of potassium bromide or sodium bromide in elixir of phenobarbital. From the use of nearly all the barbitol derivatives except phenobarbital I have seen one or more idiosyncrasies result, some mild and some severe; I have seen none due to phenobarbital.

Absolute physical and mental rest has been emphasized, and has been exaggerated to such an extent as to cause more injury than benefit. The general acceptance of absolute rest in bed as a necessity in the preoperative treatment of thyrotoxicosis is one of the many examples of how an erroneous opinion can become sanctified by the eminence of its protagonists and then become petrified by its persistence in the literature.

55 E. Washington Street.

MATTER AND SPIRIT

"Matter," as psychologically minded philosophers have at last begun to point out, is merely a substance we ourselves have invented to account for our sensations. We see, we touch, we hear, we smell, and by a brilliant synthetic effort of imagination we put together all of these sensations and picture to ourselves "matter" as being the source of them. Science itself is now purging "matter" of its complicated metaphysical properties . . . so that "matter" becomes almost as "ethereal" as "spirit," and indeed scarcely distinguishable from "spirit."—HAVELOCK ELLIS, in *"The Dance of Life."*

Notes from the International Postgraduate Medical Assembly

Reported by GEORGE B. LAKE, M.D., Waukegan, Ill.

THE 1937 International Assembly of the Interstate Postgraduate Medical Association of North America was held in the handsome Municipal Auditorium at St. Louis in October, 1937 (a variety of circumstances have delayed the publication of this report far longer than usual), and while the at-



St. Louis Auditorium where the meeting was held.

tendance was not so large as it has sometimes been (about 3,500), the session was, as always, eminently worth while for the type of physicians who like their instruction unseasoned with medical politics.

The size of the area available for exhibits rather limited the number of these important features of the meeting, but there was ample material to keep one profitably busy every minute.

Scientific Exhibit

The scientific exhibit included the usual number and variety of instructive presentations of the kind that the inveterate meeting attendee has come to expect, including ten or a dozen excellent movies of surgical technics, some of which were in full color, and several which were out of the ordinary. In this latter group were the palpating prostate models, a showing of the progress in making life more worth while for the blind, and a demonstration of anisekonia.

A group of workers at the College of Medical Evangelists, of Los Angeles, under the direction of Dr. Roger W. Barnes, had prepared a whole boothful of models, in boxes, with an aperture in the front arranged to simulate the human anus, into which the seeker for instruction could insert his finger and, under practically clinical con-

ditions, palpate a series of astonishingly accurate reproductions of the various pathologic conditions of the prostate. These models were made of a gelatin composition and were much simpler in construction than one would imagine. If arrangements of this sort come into general use, the teaching of clinical diagnosis should be greatly simplified.

It might seem strange to most people to see a group of *blind* men and women contentedly playing chess, checkers, dominoes, and bridge, but such a sight was before us in the booth of the American Foundation for the Blind, Inc. Chess is relatively simple, because each piece has a characteristic shape. Checkers is arranged by having the alternate squares on the board indented, so that the pieces do not slip about, while one player uses round pieces of the general conventional type, while the other set is square. When a king is obtained, the piece is simply turned over, exposing a symbol which indicates its value to the trained touch of the blind player. The sunken dots on the dominoes are readily recognized in the same manner, and the pieces interlock at the ends, so that they do not become displaced. The playing cards look exactly like those used by sighted persons, but tiny perforations on the edge, something like braille, indicate to sensitive fingers the suit and value of each card.

Another feature of this fascinating and highly important exhibit was the "Talking Book," consisting of sets of phonograph recordings of a large number and variety of selections from the world's worth-while literature, past and current, which give, to the approximately 80,000 blind people in the United States who cannot learn to read braille or embossed type, an opportunity to obtain the unspeakable solace of reading. These records are loaned, free of charge, to the blind, and reading machines are sold to them at cost (from \$25 to \$50). Those who are interested in this tremendously important and valuable service can obtain full particulars by writing to the Foundation at 15 West 16th St., New York, N. Y.

Anisekonia is inequality in the size of ocular images, and connotes inaccuracy in depth and space perception. The group from Dartmouth Medical School sponsoring this exhibit estimates that at least ten percent of people in the United States suffer from this ocular abnormality to some extent,

and of these, twenty-five percent are more or less disabled by it. In any case, it causes eye and nerve strain and decreases reading speed. Corrective lenses can be applied.

Commercial Exhibit

The commercial exhibit is always full of interest and value for the men who hunger for practical information, and every booth had something worth while to offer. A few of the new products shown, which seem to me to be of the widest and most practical importance will be mentioned.

Tampax is a new type of disposable menstrual protector, worn inside the vagina, which looks like the most satisfactory solution of an age-old problem that has been evolved up to now. Physicians should know about it, so as to be able to give their inquiring patients intelligent advice and information.

The Taylor people have produced a new type of triple-lens clinical thermometer—the "Binoc"—which is as easy to read as an ordinary house thermometer, and is, moreover, flat, so that it does not roll if laid down—just the thing for the busy clinician or the intelligent patient who wants to keep track of his body heat.

Rare Chemicals, Inc., has developed some new compounds of *Eucepin* (a germicidal, long-acting local anesthetic of low toxicity), which should be of great interest to all surgeons, and especially to proctologists, as the anesthesia produced by it in rectal operations is said to last for ten days or longer.

The Drug Products Co. was detailing a new compound of colloidal sulphur and calcium for parenteral ("Su-Ca-Col") and oral ("Su-Ca Pulvoids") administration in rheumatoid arthritis. The scientific and clinical background of these products appears to be sound.

The Ernst Bischoff Co. offered a new bismuth preparation for use in syphilis (especially neurosyphilis)—a suspension of the oxyiodide of the metal in olive oil, known as "Rotbi"—which seems to present distinct advantages.

Crystalline, synthetic vitamin B₁ hydrochloride ("Thiamin Chloride") is now procurable, from Squibb, for parenteral or oral use in the treatment of beriberi and various other types of polyneuritis; anorexia and loss of weight; pregnancy and lactation; and certain cardiovascular disturbances.

Here follow abstracts, made on the spot, of a number of the practical clinical papers and dry clinics presented before the Assembly. All of the papers and clinics presented at this meeting will be published, complete, in the "Proceedings" for 1937, which will soon be available.

URINARY INFECTIONS IN CHILDREN

By John R. Caulk, M.A., M.D., F.A.C.S.,
St. Louis, Mo.

Prof. of Clin. Genito-urinary Surg., Wash.
Univ. Sch. of Med.

Urinary disease occurs in two percent of infants and children, and these conditions can now be as fully investigated as similar disorders in adults, and should be as carefully studied and treated.

Pyelonephritis is common following otitis media, respiratory disorders, intestinal toxicoes, exanthems, etc. These are blood-borne infections and show a mortality of about 40 percent. These patients usually recover from the first attack, but in the second attack, be on the lookout for residual infection, masked by blocking of the ureters due to edema, and be ready to insert a ureteral catheter, if required. These infections cause old scars in the kidneys.

The symptoms include: fever, nausea, vomiting, a leukocyte count of about 25,000, stupor, convulsions, and pyuria. A complete urinalysis should be made in every case that is at all suspicious.

In giving sulphanilamide, watch the patients constantly. This valuable drug is dangerous, especially in certain conditions, and must not be used carelessly.

In chronic urinary infections, the services of a urologist are needed, because obstructions are common and, while they persist, medicines will do no good. The closed passages must first be opened and drained, and drugs given afterward.

Major abdominal operations, to correct ureteral kinks and angulations in children, are barbarous and kill many youngsters. If drainage is secured by conservative means, these conditions will correct themselves.

PRENATAL CARE

By Otto H. Schwarz, M.D., F.A.C.S.,
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To obtain the best results from prenatal care, pregnant women must be seen early, and carefully studied to ascertain the presence of cardiac conditions, nephritis, tuberculosis, hyperthyroidism, and diabetes. Women with these conditions can bear one child safely, but should not be permitted to have more.

Diabetic women, intelligently treated with insulin, bear childbirth reasonably well, but the infant mortality is high, because these babies tend to be unusually large and to suffer from hypoglycemia. We must expect trouble in these cases, watch for it, and treat it promptly. If the fetus becomes very large, it is well to do a cesarean operation at 38 weeks.

In all pregnant women, study the size and condition of the pelvis and the position of the uterus carefully. In borderline cases, it is well to hospitalize the patient and prepare for an emergency cesarean operation, but give the woman the *test of labor* under the best conditions. Many of these patients will deliver spontaneously, with proper assistance.

Watch for uterine tumors (myomas) and complete retroversion. In cases of the latter type, the urethra is lengthened, and if obstruction and dilatation of the bladder occur, use a male catheter to release the retained urine.

Eclampsia can be prevented in practically all cases, *if the patient is seen early enough*; but many report for care late in their pregnancy, and the deathrate in such cases is high—40 percent or more. This mortality can be reduced to 20 percent, or even 7 percent, by proper elimination and intravenous infusions of dextrose. The trouble is caused by edema, salt retention, and blood dilution.

To prevent eclampsia, the physician must have the full cooperation of the patient, and must recognize preeclamptic symptoms and treat them promptly, energetically, and intelligently. In these cases, the consumption of salt must be restricted, and meat proteins eliminated for the last two or three months of the pregnancy.

CONGESTIVE HEART FAILURE

By Tinsley R. Harrison, M.D., Nashville, Tenn.

Asso. Prof. of Med., Vanberbilt Univ. Sch. of Med.

Failure of the circulation occurs in two different forms: (1) The non-congestive type is characterized by weakness, fainting, a weak pulse, and a cold, clammy skin; (2) the congestive type shows shortness of breath and a tendency to edema. The old and erroneous idea was that this latter condition was due to an inadequate blood supply to the body tissues.

In congestive heart failure there is congestion of the lungs and increased peripheral pressure, due to the accumulation of residual blood in the ventricles, with resulting backward pressure in the circulation, both pulmonary and general, and diminished vital capacity. The affected parts of the heart undergo dilatation and hypertrophy. The heart does not actually fail to perform its work, but it has to expend an undue amount of energy in doing it.

Treatment: In 90 percent of these cases we cannot remove the cause of the trouble, but we can minimize the degree of failure. *Signs* of the condition appear before symptoms, which latter come most commonly from infections, especially those attended with coughing; also in cases of pregnancy,

overweight, arrhythmia, etc. We can control these precipitating conditions to a large extent, with the cooperation of the patient.

Most of the remedies used in this cardiac disorder tend to rest the heart. General body rest does this. Digitalis increases the work done by the heart, in relation to the amount of energy expended. Diuretics and venesection rest the heart by removing edema and lessening intrathoracic pressure, thus decreasing the amount of work it has to do.

Congestive heart failure is a vicious circle, so whatever improves one symptom improves the whole picture. Shortness of breath increases the effort of the heart, and so does coughing, so we should give codeine to ameliorate this latter symptom. As the failure progresses, the basal metabolic rate rises.

If congestive heart failure is properly treated, few patients die of it, though they all die with it, of uremia, pneumonia, coronary disease, and other intercurrent, but generally more or less related disorders.

DRUGS IN HEART FAILURE

By Maurice B. Visscher, M.D., Minneapolis, Minn.

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All of the digitalis glucosides increase the work and efficiency of the failing heart.

The *Digilanids*, A, B, and C (Sandoz), are standard, single active principles, whose action is reliable for each one; but among these principles, the effectiveness does not always correspond to the toxicity. Digilanid C is the most effective in relationship to its toxicity—5 percent of a lethal dose gives results. This is about 25 times the relative effectiveness of Digilanid A or B.

Calcium increases the efficiency of the heart muscle and is definitely synergistic with digitalis. Histamine also increases it; while the barbiturates and alcohol decrease the heart's efficiency.

The heart is a machine for doing work, and in treating patients with failing hearts, we must consider the various effects upon this machine of all of the drugs which we may have occasion to use.

ABDOMINAL PAIN

By Frederick J. Katterer, M.D., F.A.C.P., Philadelphia, Pa.

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Abdominal pain may be somatic or parietal, and visceral or splanchnic in origin. Different people respond to the same type and degree of pain stimulus quite differently. It is important, in diagnosis, to remember that the abdominal viscera are relatively insensitive to pain from direct stimuli, while the parietal structures and

the roots of the mesentery are much more so.

The intensity of *somatic pain* (from slight to excruciating) is in proportion to the intensity of the stimulus, and the *threshold of sensitivity* is lowered by increases in the duration and severity of the causative condition. The parietal peritoneum is sensitive to rough objects, such as blood clots and inflamed organs.

The somatic nerves are bilateral, and thus the manifestations of irritation are rather sharply localized, so that the patient points to the seat of the pain *with one finger*. In these cases, moreover, there is hypersensitivity of the skin and reflex rigidity of the muscles in corresponding areas.

Visceral pain is more dull in character, and is *segmental*, rather than localized, so that the patient *rubs his whole hand across the abdomen*. Of course, if hollow organs undergo violent contractions, sharp pain may be produced. There is neither hypersensitivity of the skin nor muscular rigidity in these cases.

Irritation of the central zone of the diaphragm causes referred pain in the top of the shoulder, but this may readily be overlaid by more severe pain elsewhere, and go unnoticed.

When pain originates in an area of low sensitivity, having close central relations with an area of high sensitivity, the pain is referred to the latter local distribution of the nerves.

In appendicitis, the pain is, at first, visceral and unlocalized, with no muscular rigidity. When the parietal structures become involved, the pain is localized in the irritated part—McBurney's point, the pelvis, or the flank, according to the position of the appendix.

It is highly important in diagnosis to determine the character, location, and cause of the pain *early*, before serious structural changes have taken place.

TREATMENT OF COMPOUND FRACTURES

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The treatment of compound fractures has improved so greatly since the World War, that amputations in these cases have been reduced from 50 percent to 1 or 2 percent.

We no longer close the skin wound promptly in compound fractures, but cleanse it thoroughly with soap and water, leave it wide open for several days, and apply wet dressings of magnesium sulphate solution, Dakin's solution, or any relatively mild antiseptic which is readily available. Strong antiseptics have a tendency to kill the more

or less devitalized tissues in these cases and cause sloughing.

These patients should be given enough morphine to make them comfortable ($\frac{1}{2}$ grain—32 mg.), and surgical intervention should be undertaken only to release pus or remove a sequestrum.

The introduction of skeletal traction, by means of wires passed through the ends of the fractured bones, has made possible the successful treatment of many cases of compound fractures which, because of extensive skin lesions, could not have been managed with splints or casts.

MIGRAINE

By Dr. Thomas Cecil Hunt,
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Migraine is a common and serious condition, even though it does not kill. It is the cause of more than four times the number of serious headaches which result from all other causes combined.

Diagnosis

In 67 percent of the cases of migraine there is a familial history of the same disorder, and 72 percent of the cases occur in women.

The attacks usually begin during adolescence or early adult life (the onset is rare after the age of 40 years), and recur periodically, at *regular intervals*, often to the very day, with *no trouble between attacks*, though the pain may, in some cases, become constant. It does not always persist throughout life, and the attacks often grow rarer and less severe with advancing years.

Attacks may be brought on by dyspepsia, a neurosis, *excitement* (pleasant or unpleasant), certain foods, cold, the menses, and a variety of other conditions, and are apt to occur when the patient is most eager to be free of them. They are rarely caused by eye-strain.

An attack may develop suddenly, or after prodromal symptoms, such as yawning, drowsiness, irritability, depression, vertigo, urticaria, or even strong euphoria. An ocular aura is present in 41 percent of the cases. The pain is *bilateral* in 57 percent of cases, so the use of the word "hemiplegia" as a synonym is a misnomer. Moreover, vomiting is absent in about 25 percent of the cases, so it is not always a "sick headache." Abdominal pain is rare in adults.

The headache accompanying *hypertension* begins later in life and is more continuous than that of migraine. Moreover, hypertensive headache is better after sleep, while that of migraine is worse.

Migraine is much more often associated

with appendectomy (30 percent) and jaundice (24 percent), than with allergic disorders (8 percent) or endocrinopathies (11 percent).

In children, "bilious attacks" are often the beginning of migraine. These young patients frequently have little headache, the gastro-intestinal symptoms predominating. If in doubt, consider the attack to be appendicitis, and proceed accordingly.

In only 15 percent of migraine cases has gallbladder disease been *proved*, and only one out of 300 patients was benefited by cholecystectomy, though many of these patients complain of "bilious attacks."

Treatment

In estimating the results of the treatment of migraine, we must allow for spontaneous remissions and cures, which occur in about 15 percent of the cases, and for the fact that, in about 30 to 40 percent of the cases, the attacks may become much milder, or cease entirely, after the age of 50 years. Few patients are encouraged by the results of the various methods of treatment generally advocated, in spite of the successful results that have been reported.

In my own experience I have found that from 5 to 10 grains (325 to 650 mg.) of *bile salts*, administered 3 or 4 times a day, produce definite benefit in about 35 percent of the cases. We must not be too hopeful about the complete cure of these difficult and often disheartening cases, and we must not despise nor underestimate the importance to these patients of *partial improvement*.

DYSPEPSIA

By Walter C. Alvarez, M.D., F.A.C.P.,
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In the group of abdominal disorders, roughly and inaccurately lumped together as "dyspepsia" (difficult or painful digestion), the *history* of the case, in spite of all the modern advances in laboratory methods, is the most important part of the examination. No *good history* can be taken in less than an hour or more. Those who content themselves with ten-minute histories are making mistakes every day of their lives.

Inquire, diligently and in detail, whether there is a history of severe psychic shock causing severe attacks of pain. Has there ever been jaundice? Tenderness? Bloating, with gas, after a heavy meal (typical of gallbladder trouble)? If so, when, and how long did it last? To determine how severe the pain actually is, ask if it keeps the patient awake at night, makes him catch his breath, or requires morphine for its relief. If the belly is opened, really *explore*

it fully, and *give the patient a complete report of the findings*.

Too many gallbladders are removed on insufficient x-ray findings or as a result of poor judgment. If this organ contains *many small stones*, remove it. If one or several *large stones* are present it is better not to be in a hurry with surgery. In *gallbladder disease*, insist that the patient reduce the size of his meals and the amount of fats in them, and that he eat his dinner at *noon*.

Twenty-five percent of women operated upon for gallstones will continue to have symptoms. This *may* be due to an overlooked stone in the common duct, but is more often the result of a *neurosis*, the gallstones being merely incidental. *Pseudocholecystitis* is common, and is frequently due to allergy. If in doubt, try an elimination diet, which may clear up the diagnosis.

If *signs* (x-ray findings, etc.) of *peptic* (duodenal) ulcer are present, inquire carefully for psychic factors anyway. Pseudo-duodenal ulcer is by no means rare. In true ulcer there are periods of relief lasting from four to six weeks; while pseudo-ulcers show few or no such intervals and the patients complain of severe pain on waking, which is not the case in true ulcers. Gastric analyses are of little value. *Spend more time and effort on the history*.

In true peptic ulcer, the patient must take food or alkali or both between meals, *regularly*, and must also take *more rest*. In addition, he must take milk several times during the night, to use up the excess acid, and *immediately* upon the appearance of pain. An hour or two after the pain starts is too late. If liquid milk is not readily available, malted milk tablets can be kept handy at all times, and from four to eight of these may be eaten, with good results.

Find out *why* the patient has an ulcer (there is always a reason, generally psychic or "nervous," if you look for it carefully enough), and correct the underlying cause. *Do not operate* upon these patients until you are at the end of your rope with medical treatment—cannot control the symptoms and the patient is too ill to work.

Constitutional inadequacy is a common condition, frequently manifested by "nervous stomach" and other gastro-intestinal complaints. Careful inquiry will bring out a history of psychoneuroses or inadequacy in the family. The "sympathetic nervous system is playing tricks."

Such a patient is sometimes severely ill and definitely incapacitated. He cannot work, because he "feels too bad"; cannot sleep, nor even *read* for any length of time. Rarely does he complain of severe pain, but suffers from constipation, bloating, nausea, and a host of other symptoms. Quite commonly he exhibits a collection of useless abdominal scars—useless because "You can't

transform a grayhound into a bulldog by any operation."

SURGICAL DIAGNOSIS OF ABDOMINAL CONDITIONS

By Mr. William H. Ogilvie, M.A., F.R.C.S.,
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In surgical cases, *promptness* in diagnosis is often more important than meticulous accuracy. We must decide whether the patient can safely be watched for 24 hours, or whether he requires an operation at once. In acute appendicitis, if we wait for a *certain diagnosis*, we will often be too late to do a *clean operation*. A rectal examination is often helpful in these cases.

We must consider the circumstances, to determine when the patient is to be seen again, and depend upon our experience and surgical judgment. If the patient is to be watched, he should be put in a hospital for observation. If in doubt, *operate promptly*.

We must rule out colics of various kinds. In *intestinal obstruction*, vomiting may cease if nothing is given by mouth, and the feces below the obstruction (often a large quantity) will be passed. We must not be reassured by one stool or productive enema, and must give the patient fluid, to see if he vomits it. If the *pulse rate* is rising, *operate at once*.

In connection with *pain*, there are ten factors to be considered and investigated: (1) How and when did it start? (2) stop? (3) its character; (4) severity; (5) periodicity; (6) duration; (7) location; (8) radiation; (9) exacerbation or instigation; and (10) its relief.

Chronic appendicitis (I do not mean recurrent cases) probably does not exist or is very rare in patients under forty years. We must exclude neurotic factors and other conditions that might cause the symptoms. If the case still looks like "chronic appendicitis," we are justified in operating with a gridiron incision and inserting one finger for exploratory palpation.

When a case of peptic ulcer needs surgical treatment, it needs a *big incision*; and when cancer is a *possibility*, there should be *no waiting*. The man who never opens a belly unnecessarily, probably fails to treat most of his cancer patients in time.

INDICATIONS FOR EXPLORATORY LAPAROTOMY

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The indications for exploratory laparotomy vary with the knowledge, skill, judgment, and conscience of the surgeon, which

are the factors generally explored by such an operation. Modern diagnostic methods have greatly reduced the necessity for such procedures.

Such operations are justified in chronic disease in the abdomen, *probably needing surgery*, which have resisted all other diagnostic methods; *never for diagnosis only*, nor to confirm an opinion. Also in acute disease in the abdomen, in which surgery appears to be the best treatment and where it would be dangerous to wait for a non-surgical diagnosis. In "acute abdomen," it is better to operate with no diagnosis than with a wrong one.

In a child with sudden, high fever, and leukocytes from 25,000 to 30,000, consider *pneumonia* carefully. If the patient grunts or coughs at the end of deep inspiration, the trouble is in the *chest*. If there is a history of sore throat or influenza, with *diffuse abdominal tenderness*, wait! It may be a case of diffuse, blood-borne peritonitis.

Coronary thrombosis may cause very acute abdominal symptoms, with a leukocyte count of about 17,000; but there is no history of long, severe dyspepsia; the belly is not very rigid; there is no free gas under the diaphragm, as there would be with a perforation. There is no urgent need for surgery in such a case, and if the patient is operated upon, he will die. An electrocardiogram would have saved his life! Think of the heart, and perform no exploratory laparotomy until you are *sure* that the trouble is in the belly. Also think of the genito-urinary system and call in a urologist or a gynecologist, if there is any possibility that they can help.

Patients with brain tumor or meningitis have abdominal crises, like those in tabes and paresis.

Make no explanatory incision in severe hematemesis, because you cannot cure it by surgery. But you may explore a subdiaphragmatic abscess, because there is nothing to lose by it. After a penetrating wound of the abdomen, or if recovery from shock does not occur after four or five hours, it is justifiable to explore.

BRAIN ABSCESS

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Brain abscess is *always secondary* to an infection elsewhere, conveyed by the blood stream or by continuity. The former type is more serious and difficult to treat. About 66 percent are conveyed by contiguity, as in compound skull fractures, etc. Extension from infected sinuses is common, and these cases are the easiest type to treat, especially if the abscess is single, which occurs

in about half of such cases. *Staphylococcus aureus* and *Streptococcus hemolyticus* or *S. viridans* are the most common causative organisms.

Diagnosis is ordinarily not extremely difficult. There are signs of infection, with fever, headache, vomiting, leukocytosis, and frequently papilledema. *Never* make a lumbar puncture unless it is *absolutely necessary*, and then only to differentiate between abscess and meningitis.

Brain abscess behaves exactly like a boil on the hand. At the end of 24 hours there is diffuse edema; after 48 hours, redness; after 72 hours, the condition is localizing and the general swelling decreases. The process runs its course in about one week and, if nature overcomes the infection, the boil or the brain abscess heals by resorption, without gross pus or an operation. If it cannot quite do this, a little help, by release of pus under pressure, will be necessary.

In brain abscess, tap the affected area with a ventricle needle, through a bone opening from 0.5 to 1.0 centimeter in diameter, and evacuate the pus. If there are multiple abscesses, tap each focus, or enlarge the bone opening, insert a finger, and open up contiguous pockets. The site of the abscess must be localized *exactly*, and this is not always easy. Tap in the place indicated by careful study, or perform encephalography, if practicable.

Never operate on a brain abscess in the acute stage, as more harm than good will be done. Wait until it is thoroughly walled off and the temperature is normal—two or three weeks after the onset. In all stages, *do the least possible* to obtain the desired results. In old, chronic cases, the abscess wall may be so tough and heavy that the whole thing can be removed like a tumor.

Surgery in Respiratory Diseases*

Part III—Pulmonary Tuberculosis (2)

By LANE BRUCE KLINE, M. D., F. A. C. S., Newington, Conn.

Phrenicotomy

INTERCEPTION of the nerve supply to the hemi-diaphragm was first conceived by Stuerz, of Switzerland, in 1911, for the collapse of basal lesions. At the present time operations on the phrenic nerve are many. The nerve may be injected with alcohol or crushed. A small section may be removed, or a longer segment of about 10 cm., to include the accessory nerve. The most radical method is complete avulsion of the nerve. The method of choice at present is to be content with crushing the nerve, which usually paralyzes the diaphragm for a period of six months. The crushing, to be effective, must include the junction of the accessory nerve. By this time the objective of the operation may be evaluated and, if desired, the crushing may be repeated or the nerve may be removed.

Avulsion of the nerve is not without danger. Tearing open blood vessels causing serious hemorrhage, damage to mediastinal structures, even tearing lung tissue, opening abscesses, dyspnea from lowering vital capacity and flooding the lung with purulent products from sudden elevation of the diaphragm have all been charged to phrenic nerve operations. However, phrenicotomy,

especially crushing, has a very secure place and, if too much is not expected of it, fits into the scheme of thoracic surgery to a satisfactory degree.

O'Brien, of Detroit, favors phrenicectomy rather than crushing. It is of value when used alone, before fibrosis and encapsulation become hard and unyielding, to close basal cavities, and it is not without influence in closing cavities near the apex and in the mid-lung zones. It also lessens cough and expectoration. It probably performs its best service as an aid to pneumothorax and to thoracoplasty. It is of service when the time comes to reexpand a collapsed lung whose volume, shrunken from fibrosis and loss of substance, is unable to reoccupy the hemithorax completely. Combined with apicolysis, it further aids in healing when other methods are contraindicated.

Technic

The operation is simple. Local anesthesia is used and the incision may be transverse, beginning one inch above the clavicle and at the lateral border of the *clavicular* branch of the sternocleidomastoid muscle, or the incision may parallel the muscle border. The vessels are carefully turned aside or ligated, care being taken not to injure them and to avoid the danger of air embolism. It must also be recalled that the thoracic

*This is the third and last installment of a three-part article. See Part II (Dec., 1937) for official permission to publish.

duct sometimes swings rather high in the neck. The safe point is to keep above the omohyoid muscle. Blunt dissection is made through a pad of fat and loose tissue to the scalenus anticus muscle, which lies just beneath the mastoid muscle.

The phrenic nerve normally traverses the anterior surface of the scalenus anticus muscle, slightly obliquely from above downward and inward. The nerve may pursue an anomalous course on either side of the scalenus muscle or be hidden within the substance of the muscle. The nerves of the brachial plexus are branched and are directed obliquely outward, are lateral to the scalenus muscle and at a deeper level. The vagus nerve has been sectioned by mistake. This nerve is adjacent to the carotid artery and is larger than the phrenic. The latter may be identified by pinching, which will cause pain in the shoulder and a sudden contraction of the diaphragm.

The nerve is to be anesthetized before crushing or cutting. In removing the nerve after section, the distal end is seized in a hemostat and the latter rotated windlass fashion. For complete avulsion the winding is performed very slowly for from ten to fifteen minutes. More rapid winding causes the nerve to break and is done intentionally when only a portion of the nerve is removed. Because an accessory nerve joins the main branch about 10 cm. distant from the site of phrenicotomy, and is capable of taking on the full function of main branch, it is desirable to accomplish the break beyond this branch.

Thoracoplasty

While radical collapse preceded pneumothorax, it was the latter that emphasized the need and promoted the development of the former. Thoracoplasty is more drastic and the immediate risk greater than in pneumothorax, but in the long run the net results are better. That thoracoplasty has accomplished substantial success need not be marvelled at, when it is considered that it supplies that long-sought rest in the treatment of pulmonary tuberculosis when all other methods fail. It cannot, however, accomplish the impossible, and it is not a cure-all. It performs able service when the tuberculous process is limited to one lung with lesions of the fibro-ulcerative, cavernous type, and before degenerative changes have made debilitating inroads in other viscera. If a lesion is present in the opposite lung, it should be small and show substantial evidences of healing. The patient must also show that he has substantial resistance to tuberculosis, hence the fibro-cavernous type is more favorable than the exudative, pneumonic type. As expressed by Phillip B. Matz, Research Subdivision, Veterans Administra-

tion, "It is essential that the resistance and recuperative power of the patient be greater than the tendency of the disease to spread, before thoracoplasty is decided upon: this is the crux of the problem." Thoracoplasty is indicated in chronic fibroid phthisis with cavitation, where pneumothorax, for one reason or another, has failed or is not applicable; in bilateral apical tuberculosis with cavity; and in tuberculous empyema.

The chest picture of chronic pulmonary tuberculosis is familiar to everyone. The ribs of the side affected are retracted and their movements limited, the diaphragm is elevated, and the mediastinum is drawn toward the diseased side. This is nature's attempt to close in and compensate for loss of tissue, and to reestablish intrathoracic pressure. Against the success of this effort are arrayed the bony and relatively unyielding costal cage and the thick, hard cavity walls, with intervening fibrosis. Regardless of what nature may attempt or watchful waiting inspire, there remains an uncollapsible residuum of protected tuberculous activity that insures prolonged invalidism and neighborhood infection. Obviously the one deterrent to nature's effort to heal should be removed. Fortunately thoracoplasty, due to improved technic and knowledge born of experience, is now applicable to far-advanced cases and to those formerly regarded as hopeless.

When pneumothorax is unsuccessful because of unyielding and broad adhesions, when cavities remain open, when spread is evident and the contralateral lung is threatened, then the prompt application of thoracoplasty is indicated.

It is not always necessary to collapse an entire side. In lesions limited to the apex, the first and second ribs are removed and substantial portions of the third to the sixth. In bilateral apical lesions the same collapse may be applied to both sides. The extent of ribs removed is governed by the extent of the lesions to be controlled and limited only by the margin raised in safeguarding the integrity of vital capacity.

It was noted early in the development of this type of surgery that there was a material drop in mortality when the two-stage superseded the one-stage operation, so that now the number of stages is adapted to the work to be done, the patient's physical condition, and native resistance. Fatalities are not due to rib resection alone, but rather to the immediate consequences of sudden changes in tension. The many-stage operation permits a gradual adaptation of intrathoracic pressure to the new condition; a smaller amount of exudate is forced from cavities to flood the respiratory tract; there is a lessened degree of toxic absorption incident to compression of the diseased lung;

and the cardiac burden is buffered. To lessen the impact of this surgery it is often desirable to perform a preliminary phrenicotomy or induce pneumothorax or even both. Again quoting Doctor Matz: "The longer surgically treated tuberculous patients are kept under observation (before operation), the greater will be the mortality rate."

Extrapleural Pneumolysis (Apicolysis)

Extrapleural pneumolysis is an operation in which the apex is collapsed by separating the parietal pleura from its rather close intimacy to the bony chest wall and endothoracic fascia, removing, if need be, a portion of the second and third ribs, and executing the separation by blunt and finger dissection. It has been used in connection with thoracoplasty to insure greater apical collapse. Various substances have been used to maintain the collapse thus made. Fat, muscle pedicles, bone fragments, gauze packs, and paraffin, especially the last-named, all have been used. It is an operation of quite limited use and, with improved thoracoplasty technic, is gradually falling into disuse. Its best service is performed in adherent apex, when even a limited thoracoplasty is not permitted, and as an emergency measure to close a hemorrhagic cavity. This operation is not necessarily limited to apical lesions. It may be, and has been used to close cavities in other lung areas.

Intrapleural Pneumolysis

Intrapleural pneumolysis, known as the Jacobaeus operation from its founder, is used in connection with pneumothorax when the lung is under partial collapse and cavities remain open from the retarding effect of pleural adhesions. These bands are visualized and studied in their relationship to lung tissue and blood supply through a thoracoscope, an instrument constructed on the same principle as the cystoscope. Under direct visualization, the electrocautery severs the adhesions at an advantageous point, thus releasing the tension on the uncollapsed lung.

This measure is of immense help in thus promoting collapse, but it has, of course, its limitations. Adhesions in inaccessible parts and adhesions that are broad and short, into which lung tissue is incorporated, offer situations beyond the scope of this operation. It is an operation that sometimes improves a situation when pneumothorax has reached an impasse.

Oleothonax

Oleothonax was suggested and first used by Matson and Mackenzie in 1914. Paraffin oil was used at first; then followed the use of Gomenol in pyothorax. Later, oleothonax

was much used to induce collapse in Europe, and to less extent in America. It is indicated in obliterative adhesions in the course of induced pneumothorax, and in effusions for the same reason. The advantages in general are that refills are needed less often than in pneumothorax; pressure is more effective; it prevents the formation of adhesions, collapses cavities, splints the lung and stabilizes the mediastinum; and certain oils are bactericidal. It is used also in spontaneous pneumothorax to close check-valve perforations, and in old pneumothorax cases to prevent or to treat tuberculous pleurisy. The oil is to be used only when collapse has been established, either by air or fluid. The contraindications are bronchial fistula, irritating effects of certain oils and danger of the development of a neoplasm from paraffin, acute pleurisy, or ordinary serofibrinous exudate, oils that have foreign body reactions, extensive adhesions, myocarditis, and low blood pressure.

Oleothonax is not successful in the control of apical cavities. Vegetable oils are the best, such as sterile olive oil. When Gomenol is used, the strength is from 2 to 6 percent. More recently a very good, non-irritating, and highly efficient disinfectant substance, Azochloramid, has been used. The indications for oleothonax and the technic governing its introduction to the pleural space are more exacting than that of pneumothorax. A special apparatus has been designed by Minas Joannides.

Scaleniotomy

Scaleniotomy was devised by Gale and Middleton, in 1930. The scaleni muscles, three in number, arise from the transverse cervical processes and are attached to the first and second ribs. These are muscles of respiration and elevate the ribs in inspiration. By severing these muscles from their rib attachments it was found that the upper ribs were lowered and their expansile movements were less. The operation was often combined with phrenicotomy and as preliminary to thoracoplasty, as well as to support pneumothorax. The dangers are injury to the subclavian artery and vein and injury to the brachial plexus and thoracic duct. The operation has not found popular acceptance.

Drainage Operations

Not to cut into a tuberculous lesion has long been a truism in surgery, as it breaks into the capsule of fibrosis, permitting dissemination, the formation of fistulous tracts, and the ingress of mixed infection.

Thoracoplasty is an operation outside the tuberculous area. The various ankylosing operations on joints are likewise in tissues outside of the centers of activity. The ablation of tuberculous fistulous tracts, in

order to succeed, must be done through healthy tissue. A needle may be passed into an abscess cavity to aspirate, but care must be taken not to contaminate the tract, which closes immediately.

There are times when, to choose the lesser of two evils, it becomes necessary to incise openly a tuberculous abscess to relieve tension and to obviate the destructive menace of pent up exudate. Often, in fibrotic lesions, there is found a rather large collection of purulent material containing mixed infection, the drainage through the bronchus is meagre, and the patient shows signs of sepsis. Here there is the constant threat of sudden flooding, with resultant aspiration pneumonia and wide dissemination. The abscess is located near the chest wall and usually the pleura is firmly adhered. These may be drained by rib resection, in the same manner as the nontuberculous abscess. If the pleura is not adherent, it should be packed until the remainder of the pleural space is made secure from contamination by adhesions. The cavity may be entered by a thermo cautery and the contents evacuated. No irrigation is used because of the bronchial fistula which is usually present. The cavity may be lightly packed with iodoform or Azochloramid gauze; the dressings are to be changed daily. A fistula will form, which may be closed subsequently.

Progress of Chest Surgery in the Veterans' Administration

Because the technical advances and success of modern thoracic surgery have been so vast, the Veterans' Administration has seen proper to designate certain of its hospitals as Chest Surgery Centers, in order that the best treatment may be made available for its beneficiaries. These are now eight in number and are located strategically, as follows: Castle Point, N. Y.; Aspinwall (Pittsburgh), Pa.; Portland, Ore.; Oteen, N. C.; Legion, Tex.; Tuscon, Ariz.; San Fernando, Calif.; and Hines (Chicago), Ill.

Chest surgery is not necessarily limited

to these places, but because of personnel and equipment certain cases are sent here when occasion and necessity arise. The indications for chest surgery are determined by a board of surgeons and internists, including the physician in immediate charge of the patient. For their assistance the findings of the pathologist and roentgenologist and such laboratory data as seem desirable are made available.

In addition to a very lively affiliation on the part of the medical personnel with the various scientific societies, physicians of the Veterans' Administration sit in with an informal round table conference each year at the annual convention of the National Tuberculosis Association. In this way there is a frank exchange of ideas and experiences on the part of leaders in the field of clinical tuberculosis and thoracic surgery.

During the period from October 1, 1936, to March 31, 1937, 8,654 tuberculosis patients were under treatment in the various sanatoriums of the Veterans' Administration. Of this number, 71 percent were far advanced; 25 percent, moderately advanced; and approximately 5 percent, in the incipient stage. The average age was 45 years. During this period, 1,329, or 15 percent, received some form of surgical collapse. Of this number, 77 percent had been treated by pneumothorax; 9 percent by phrenicotomy; 5 percent by some form of thoracoplasty; 2 percent by intrapleural pneumolysis; 6 percent by drainage operations; and a scattering of extrapleural pneumolysis. During the same period 456 patients were discharged as follows: 3 percent, much improved; 53 percent, improved; 23 percent, unimproved; and 21 percent died.

When we consider the advanced age of the patients and the advanced stages of the disease, these figures are encouraging. A few years ago nearly 75 percent of these cases would have been considered hopeless, and now 56 percent of them are able to be discharged from hospital as improved.

Veterans' Administration Facility.

THE END

HEALTH AND CHARACTER

What we need most for the attainment of health as individuals is not so much more knowledge as a change of heart. A country's greatest asset is character. Let us, therefore, cultivate character and let health look after itself, being assured that, to a nation made up of men and women of character, all things, health included, will be added.—DR. ROBERT HUTCHINSON, of London.

PERSONAL PEACE

We might enjoy much peace, if we would not busy ourselves with the words and deeds of other men, and with things which appertain nothing to our charge.—THOMAS A. KEMPIS.

Physical and Office Therapy and Radiology



Associate Editors

FOR PHYSICAL THERAPY

Frank Thomas Woodbury, B. A., M. D.

Joseph E. G. Waddington, M. D., C. M.

FOR RADIOLOGY

Henry Schmitz, M. D., F. A. C. S., F. A. C. R.

M. J. Hubeny, M. D., F. A. C. P., F. A. C. R.

FOR OFFICE THERAPY

Ralph L. Gorrell, B. S. M., M. D., D. N. B.

Nutrition in Nervous and Mental Diseases

By ERWIN WEXBERG, M. D., New Orleans, La.

Head of the Department of Neuropsychiatry, Louisiana State University

AS IN MEDICINE in general, so particularly in neurology and psychiatry, our ideas about etiology and pathogenesis have changed, with better knowledge of the complexity of pathologic mechanisms. There are, indeed, very few diseases of the nervous system plainly referable to one particular cause, without any concurrent factors, constitutional, as in certain syphilitic affections, traumatic, endocrine, or metabolic. Thus, most organic and functional diseases being due to a multiple pathogenesis, the problem arises, in practice, which might be the best therapeutic approach. The fact that, for instance, calcium treatment has proved to be efficient in cases of spasmophilia or tetany, does not mean that an insufficiency of calcium metabolism, and *nothing else*, is the primary cause of those conditions. It only proves that that is the best approach, or one of the best, to the complex structure of interacting pathogenic factors.

A similar point of view is valid also for recent observations concerning the importance of a metabolic factor in a number of nervous and mental conditions which, hitherto, had not been considered under the heading of deficiency diseases. Until recently, the only ones in which the vitamin deficiency factor had been recognized as being essential, had been beriberi and pellagra, related

to vitamins B₁ and B₂ (or G) deficiency (or B₂ combined with other vitamins of the B group), respectively. The most frequent form of beriberi, as far as the nervous system is concerned, is polyneuritis; whereas, in pellagra, acute psychoses of a delirious type point toward cerebral involvement.

Even in beriberi and pellagra, the universal validity of the deficiency factor does not seem beyond any doubt. It is a fact that many people, living on the same deficient diet which is being blamed for beriberi or pellagra, respectively, do not fall ill at all. That is why, particularly for beriberi, an infectious factor, too, is suspected, the more so since it is endemic in certain countries, while being rare in other ones with a population living on the same poor diet. However, the practical fact that beriberi and pellagra can be cured by means of a high-vitamin diet, certainly is true, which proves that the deficiency factor is *one* of those essential in pathogenesis.

Recently some other frequent conditions with an apparently well-established etiology have been found to belong to the category of diseases in which nutritional deficiency is a factor. I am referring to nervous affections due to *alcoholism*. It has been shown, by Wechsler, Strauss, Perkins *et al.*, that

alcoholic polyneuritis can be cured rather soon by a high-vitamin diet, and even that this cure can be accomplished when the patient goes on taking the same amount and the same kind of heavy drinks he was in the habit of using.

The explanation of that fact, which I found to be true in my observations, is that alcoholism very often involves vitamin deficiency, for three reasons: (1) Because alcoholics often do not care for eating, the more so since part of their caloric requirement is supplied by alcohol; (2) because alcoholism often causes severe gastrointestinal disturbances, which may interfere with the absorption of food in general, and of vitamins in particular; (3) because the vitamin-B requirement is directly related to the caloric intake of the organism, so that those additional calories supplied by alcohol, in case of heavy drinking, if not covered by additional vitamins, may account for a relative avitaminosis, even with a normal diet. There is some evidence that alcoholic psychoses, too, are, at least partly, determined by the deficiency factor. I found surprisingly quick recoveries from alcoholic delirium and hallucinosis, when they were treated with a high-vitamin diet.

The enlargement of the conception of deficiency diseases goes even farther than that. Rather frequent cases of polyneuritis from unspecific *gastro-intestinal disease*, such as ulcerative colitis, or after operations on the gastro-intestinal tract, such as colostomy or gastro-enterostomy, can be explained on the same line and usually yield to a high-vitamin treatment. It must not absolutely be vitamin deficiency, in every case. Experimental as well as clinical experience has taught that plain starvation, even with a sufficient vitamin supply, may cause the same troubles. Again, it has to be pointed out that so-called toxic psychoses, which have often been found together with gastro-intestinal disease, with or without multiple neuritis, are to be included in the clinical picture of nutritional deficiency.

Another group of cases of peripheral nerve involvements and toxic psychoses—those occurring during or immediately after pregnancy—probably belong under the same heading. Whether, in those cases, the metabolic disturbance is due to relative avitaminosis, caused by the vitamin requirement of the fetus, or to endocrine factors, is still unknown; but a high-vitamin diet is usually helpful.

Up to now, little attention has been paid to *spinal involvements* which, according to experimental evidence, can be caused by deficiency. Only recently, the well-known spinal syndrome of *postero-lateral sclerosis*, which has generally been found together with pernicious anemia and gastric achlor-

hydria, is being considered under that aspect. Among six cases of postero-lateral sclerosis which I saw in the past year, not even one had pernicious anemia, but all of them had a moderate oligochromic anemia and very low figures of gastric acid. That makes it rather probable that one group of factors causes anemia (pernicious or oligochromic form), gastric anacidity, and postero-lateral sclerosis, or either one of them combined with another, as coordinated symptoms. I saw excellent results, in my cases, from a high-vitamin diet, together with liver extract. The "liver factor," which is considered essential in the treatment of pernicious anemia, also seems to belong to the vitamin category, though it is probably, under normal conditions, partly supplied by as-yet-unknown hormones of the liver and the gastric mucosa.

Finally, I found some evidence for the belief that certain cases of *transverse myelitis* of unknown etiology, which hitherto had been considered as being of infectious origin, belong to the category of deficiency diseases. Vitamin treatment was followed by visible improvement, even in old cases. Of course, improvement did not lead to recovery in the latter ones, and that is exactly what might be expected in a condition of that kind. Those changes due to metabolic deficiency are likely to be reversible in a recent stage of development, but later to become irreversible, so that, in a case of late treatment, the recent damage may be repaired, whereas all tissue that already has degenerated, is degenerated permanently.

Summary

It now appears reasonably certain, according to recent experiences of other observers as well as my own (based upon a series of 62 cases), that metabolic deficiency has been recognized as playing a larger part than has been known before, as a factor in organic diseases of the nervous system. The *metabolic crisis* in question may be brought on by a diet deficient in vitamins (besides the B group, the A and C vitamins, too, probably are important, and the unknown "liver factor"), by starvation, lack of absorption due to gastro-intestinal disease, alcoholism, pregnancy, and possibly by certain endocrine factors still unknown. My results in treating such cases with high-vitamin diet, as compared with others kept on a normal diet, are very definitely in favor of that idea. Even in cases with an obviously infectious etiology, like syphilis, metabolic deficiency may be a contributing factor. Therefore a high-vitamin diet (fruit, fruit juice, tomatoes, green vegetables, whole-wheat bread, butter, etc.), together with brewer's yeast tablets, cod-liver oil, and

liver extract, is recommendable (1) in cases of peripheral neuritis from whatever cause; (2) in cases of postero-lateral sclerosis, transverse myelitis, and other acute or subacute spinal diseases of unknown origin; (3) in cases of acute "toxic" psychoses, or delirium, with or without an alcoholic basis; and (4) as a supplementary treatment in cases of spinal syphilis.

This treatment, which certainly cannot do any harm, will sometimes have astonishing results, which otherwise probably would not have been accomplished. In addition, observations along that line may throw some light on the pathology of many of those conditions which, hitherto, are still scarcely understood.

★ Notes and Abstracts ★

The Diagnosis of Bone Tumors by Arteriography*

UNDER LOCAL ANESTHESIA, in performing arteriography, the main artery to the limb is punctured, 5 to 20 cc. of Thorotrast is injected, and immediately thereafter roentgenograms are taken in rapid succession. In order to obtain the best contrast, the artery above the injection should be compressed until the first plate has been exposed. If practical, the artery should also be compressed below the lesion. After the first picture, all compression is released and the next pictures show the venous circulation.

In benign new growths, the blood-vessels are displaced by the growth, but they are regular in caliber and number. In giant-cell tumors, there is an artery following the capsule. In malignant tumors, there is an irregular network of newly formed vessels running to the tumor. In chronic osteomyelitis, there is a decrease in the number and caliber of the arteries, due to an ischemic process. Metastatic malignant tumors present the same characteristics as primary neoplasms.

P. L. FARINAS, M.D.

Havana, Cuba.

Who Owns the Radiograph?

IF THERE IS NO DIFFERENCE between the commercial photographer and a radiologist, then a discussion of the ownership of an x-ray picture is futile; but if the medical profession recognizes the radiologist as a consultant, then the reason for this presentation is obvious.

X-Ray plates must never leave the office permanently, and not even temporarily unless it is well understood that they will be returned in a short time. They are the only absolute record the roentgenologist has, and if lost, he is greatly handicapped. They not only materially affect financial matters; but

reputations, professional ability, false accusations, and numerous other things may in time rest wholly on the findings depicted in the roentgenogram. The radiologist is continually being approached by patients demanding that the plates be delivered to them, for, as they say, "I paid for them." This can be refuted, as it has been done in courts many times, by citing the fact that the fee paid was not for the picture, but for the opinion based on the plate.—LESTER J. WILLIAMS, M.D., in *New Orleans M. & S. J.*, Aug., 1937.

Complications Following Coagulation of the Cervix

THE MOST SERIOUS COMPLICATIONS resulting from diathermic coagulation of the chronically infected cervix are: Immediate or late hemorrhages, pelvic inflammation, obstruction of the external os by membrane formation, and cicatricial stenosis of the cervical canal. The latter results in the formation of a hematometra, and later on of pyometra, pyosalpinx, and peritonitis by complication or infection.—R. G. HERRERA, M.D., in *Semana Med.*, June, 1937.

Accidents during Peripheral Vascular Treatment

AN INTRAVENOUS INJECTION of 50 million typhoid bacteria (vaccine) resulted in a chill, during which a cerebral hemorrhage occurred and the patient died. Severe coronary thrombosis, without fatality, has been observed during the intravenous administration of small doses (50 to 100 cc.) of 5-percent dextrose solution. I have seen pressure-suction boot treatments cause excoriations of the thigh, which in one case produced a large slough. I have seen them result in skin ulceration on the side of a leg, with acute thrombosis, necessitating a

*Radiol., July, 1937. (Several beautiful illustrations accompany this article.)

higher level of amputation than would otherwise have been required, in bleeding in drained wounds of the foot and the sites of amputated digits; in cellulitis while treating a quiescent, slowly subsiding ulceration in a case of thrombo-angiitis. A pressure-suction apparatus which cannot be adjusted to the patient's tolerance should be rejected. —BEVERLY C. SMITH, M.D., in *Arch. Phys. Ther., X-Ray, Rad.*, July, 1937.

Splenic Calcification

OCCASIONALLY, calcification is noted in the spleen during the course of abdominal x-ray examinations. Large areas are quite uncommon. The condition may be due to echinococcus cysts, old infarcts, healed abscess, rarely to bone-forming metastases and so-called primary tuberculosis of the spleen, occurring in the young adult. In the latter disease, marked splenomegaly, associated with large granular areas of calcification, constitutes a pathognomonic picture.

Most of the miliary calcifications represent phleboliths rather than healed tubercles. —THEODORE BERMAN, M.D., in *Radiol.*, July, 1937.

[In two instances, we have seen the whole spleen calcified, as a result of chronic echinococcus cyst. Both patients were of middle age and both were foreign-born. Complaints were only of pressure and dyspepsia.—R.L.G.]

Caution in Use of Ultraviolet Rays

THE FACE SHOULD ALWAYS be exposed to ultraviolet rays laterally, so as not to burn the tip of the nose.—E. A. MULLEN, M.D., in "Handbook of Treatment" (F. A. Davis Co.)

★ Books ★

Griffin: Physical Education

THE SCIENTIFIC BASIS OF PHYSICAL EDUCATION. By F. W. W. Griffin, M.A., M.D., B.Ch., Medical Advisor to the Incorporated Lucas-Tooth Boy's Training Fund (Lucas-Tooth Gymnasium, London); Assistant County Commissioner (Physical Education) to the London Boy Scouts; Editor, *Journal of the Chartered Society of Massage and Medical Gymnastics*. With a Foreword by Sir E. Kaye Le Fleming, M.A., M.D., B.Ch., Chairman of the Council, British Medical Association. 190 pages. London: Oxford University Press. 1937. Price, \$2.75.

To those of us who read medical literature constantly, there comes occasionally a discouraging feeling that little of what we

read is important; that the new remedies will be out of fashion in a few years; the new operations properly devaluated; and that we have gained so little in actual knowledge of the human body and its workings, that we are but repairmen, called to the scene of wrecks to do as much patching as we can, but with little hope of restoring permanent good health. The accidents of ill-health can be prevented by proper nutrition, proper rest, and proper exercise, so that practitioners of medicine must get a long-range view of preventive medicine and advise their patients on every angle of their daily living.

Dr. Griffin's book makes interesting reading because it recalls fundamentals of the physiology of exercise and introduces us to new principles which have been recently discovered. Armed with this knowledge, one has a scientific basis for advising the proper type of exercise for one's patients and oneself, and a conception of what benefits may be gained thereby.

"A man in poor physical condition is easily exhausted by mental or physical exertion; he is irritable and morbid, and suffers from petty ailments." These ills can be corrected better by proper use of his body than by pills.

Kaplan: Radiation Therapy

RADIATION THERAPY. By Ira I. Kaplan, B.Sc., M.D., Clinical Professor of Surgery, New York University Medical College; Director, Radiation Therapy Department Bellevue Hospital, New York; Director, Division of Cancer, Department Hospitals, City of New York; Director, New York City Cancer Institute; Associate Radiologist, Lenox Hill Hospital; Editor (Therapeutic Section) "Year Book of Radiology." 1937. New York: Oxford University Press. Price, \$10.00.

Dr. Kaplan has brought forth a book of widespread usefulness on the treatment of benign and malignant conditions with radiation therapy. As director of large cancer services, his clinical background is of the best, and as editor of the "Radiologic Yearbook," he is kept in contact with innovations throughout the world. As a result this volume is a rare combination of practicality and conciseness. It is illustrated with many clinical photographs, to which are appended the histologic diagnoses, technic of treatment, and end-results. There is a full discussion on x-ray physics, estimation of dosage, filtration, various types of tubes, et cetera, followed by chapters on radiation therapy as applied to dermatologic, ophthalmologic, otolaryngologic, thoracic, breast, gastro-intestinal, gynecologic, genito-urinary, neurologic, endocrinologic, inflammatory, and osseous conditions. Irradiation in blood dyscrasias, injuries and complications of radiation, trauma and cancer, the nursing care of cancer patients, and a discussion on a radiation therapy department complete the list of subjects covered. The book is excellently printed and bound.

A Living for the Doctor

(The Business of Medicine and the Art of Living)



Associate Editor: Ralph L. Gorrell, B.S.M., M.D., D.N.B.

America's Greatest Citizen

ONE HUNDRED AND TWENTY-NINE YEARS AGO, on February 12, 1809, the greatest citizen which this Republic has yet produced was born on a primitive pioneer farm near Hodgenville, Kentucky, and began that life of bitter hardship, almost unbelievable effort, and practically continuous sadness which was ended by the bullet of a misinformed fanatic on the night of April 14, 1865, just after the successful climax of the titanic struggle which decided the question, whether this great central area of the North American Continent should be one independent nation or two.

It may seem a bit strange to call particular attention to this significant birthday in a medical magazine, but it should not be so, for in this hurried and forgetful generation, all of our citizens need to be reminded frequently of the achievements of the men who made possible the conditions of unexampled opportunity which we have enjoyed until very recently, when the shadow of alien and historically discredited philosophies has fallen upon our people from high places.

Especially should medical men cherish a

deep interest in the Great Emancipator, for Abraham Lincoln was never a "normal" person, in the technical acceptance of that

term, and demonstrated once again the generally accepted dictum that the genius is a biologic sport, who frequently builds a great structure of character out of what appear to be the most unpromising materials.

From that fascinating book for students of medical history and of the medical aspects of general history,

"Lincoln and the doctors," by Dr. Milton H. Shutes,* we learn that Lincoln was far from being a model of physical perfection. He was almost certainly hyperpituitary (his height was six feet four inches), and probably hypogonadal (suggested by the disproportionate length of his limbs and by his highly unsatisfactory married life), though he was unquestionably potent and fertile; his body was lean and sinewy, his posture stooping, and his gait without resiliency; his face was markedly rugged and his features large and noticeably asymmetric; his physiologic functions were sluggish; and he suffered, all his life, from a profound depressive



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*Pioneer Press: New York. 1933

psychoneurosis, so that Herndon, who knew him intimately, said of him: "He looked woe-struck. The whole man, body and mind, worked against more or less friction and creaked as if it needed oiling."

He was certainly not a great scholar (his formal education was rudimentary). He was an able, but scarcely a great lawyer. He was an astute politician, but probably not a great statesman. He was far more than any of these things, a great MAN—a great soul—the type that was never more urgently needed than now, when the species appears to be extinct, though history proves that it is never actually so.

Who is there in public life today, in any field of activity, who would labor as he labored; suffer as he suffered; struggle, as he did, with seemingly insurmountable handicaps; and yet hold fast to his unshakable

faith in the fundamental soundness of mankind until that faith was vindicated? Who is there that has the qualities of a great leader, coupled with the deep human understanding and tenderness typified by the artist, Pruett Carter, in the accompanying picture? When Lincoln visited the war hospitals, as he frequently did, he was as gracious and sympathetic to those who had been wounded in a gray uniform as to those who had worn a blue one. Who follows his example today?

Truly, it would be immensely well if every physician in our land (and every other literate citizen, for that matter) would spend a few hours, at rather frequent intervals, in studying, *in detail*, the life and activities of this, our truly greatest citizen, whose birthday we celebrate this month.

G. B. L.

★ Notes and Abstracts ★

Making Progress with People

DO NOT TELL PEOPLE their faults nor force them against the wall so that they will have to tell you their weaknesses. Do not "show them up." Do not deliberately show them your superiority, and do not permit others to become jealous of you.

When people know that you know their faults and weaknesses, right or wrong, they resent it and will immediately look for faults and weaknesses in you. Should they find minor faults, they will exaggerate them until they are major ones. Likewise, major good qualities will be converted into minor ones, or even into defects. Since people see what they want to see, and do not see what they do not want to see, it will be easy for those who are prejudiced against you to build you up in their own minds (and sometimes in the minds of others) as they want you to be. Therefore, even when you know of others' weaknesses and faults, in general, do not tell them about these defects nor permit them to know that you are aware of them.

Should you, consciously or unconsciously, cause others to be jealous of you, the same situation will follow. At times a jealous reaction may lead an individual, not only to act unjustly, unwisely, and blindly, but even in corrupt and dangerous manners. After so acting, the jealous individual will rationalize in his mind, not only justifying his actions to his own satisfaction, but will probably justify his actions to others.

When you criticize others or cause them

to be jealous, then and there reason is blunted, dwarfed, or annihilated and the emotions rule. Under such a condition, the unconscious is the governor and the conscious is the slave. The conscious is more easily controlled, for the unconscious is difficult to handle because it is unconscious. What you know and understand accurately can be controlled with relative ease, but what you do not know and what is unconscious cannot be controlled at all or only within limited degrees.

There, be sure that you prevent in yourself and in others one of the commonest and most dangerous instincts, which is often unconscious—jealousy. Jealous reactions are found even in college professors, professional and business men, ministers, and politicians.

SAMUEL KAHN, M.D., Ph.D.

Atlanta, Ga.

State Medicine in China

IT IS A MATTER OF GREAT INTEREST to find that State Medicine, the most vital problem facing our profession, has a very long history in this country (China). A kind of State Medicine existed at the time of the Chou dynasty (1121 to 249 B.C.). The Chou Rituals say: "The chief physician superintends all matters relating to medicine and collects drugs for medical purposes. He directs the doctors to take charge of the different departments, so that those who are sick or wounded may go to see them. At the end of the year, their work is examined, and the salary of each fixed ac-

cording to the results shown. If all cases get well, it is excellent; if there is one failure in ten cases, it is second; if two out of ten, third; three out of ten, fourth; and if four out of ten, it is bad. When any death occurs, the physician in charge has to record the cause of death and submit a report to superintendent." — *Chinese Med. Journ.*, June, 1937.

The Effect of Group Practice on the Member of the Group*

MOST OF THE DISCUSSION of group practice has traditionally been concerned with the effect on the patient or on the quality of medical practice, not upon the doctor, or upon his income. In the whole project which "American Medicine" (see CLIN. MED. & SURG., May, 1937, p. 226) represents and reports, one of the most encouraging factors, to my mind, is the almost complete absence of consideration, by the doctor-authors of the views presented, of concern with the doctor's own economic status. There is here no decisive answer to the question whether group practice offers a medical practitioner greater financial security. Some members of the groups depose that they do not, perhaps, make as much money as they would be making alone. Others feel that they have improved their financial status.

But there is rather general agreement that members of groups worry less about what they make—whether it is much or little—than do individual practitioners. The group, it is maintained, removes from the doctor the alien task of business accounting; by separating business and professional interest, it leaves the practitioner free to practice medicine. Doctors—both inside and outside groups—speak not only of this freedom from the financial worry which members of groups may enjoy, but, more often and more importantly, of the opportunities they have to promote their professional competence. The individual practitioner, they point out, becomes a slave of a daily routine. Drive himself as he will, he can never finish the day's work, never reserve for himself for writing, for study, for contemplation, the hour or two he vainly hopes every day to capture. In the group system, the presence of comprehensive records, the habit of conference, makes easily available the facilities for research. More regular hours, sabbatical years, daily research—by these, it is claimed, the group offers to the practitioner that answer to the doctor's prayers—a chance to maintain his competence.

WILLIAM B. PORTER, M.D.
Richmond, Va.

**Virginia Med. Monthly*, Aug., 1937.

God Give Us Men

God give us men! The time demands
Strong minds, great hearts, true faith and
willing hands;

Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without
winking;

Tall men, sun-crowned, who live above
the fog

In public duty and in private thinking.
For while the rabble with their thumb-
worn creeds,

Their large professions and their little
deeds

Mingle in selfish strife, Lo, Freedom weeps!
Wrong rules the land and waiting Justice
sleeps!

J. G. HOLLAND.

(Reprinted)

How It Works

GERMANY'S compulsory health insurance system has a set-up including more clerks and officials than physicians.—*Science News Letter*, Oct. 16, 1937.

The Modern Medico

THE MODERN MEDICO is the end-product of our present civilization. To paraphrase an earlier description, he must combine the finesse of a diplomat, the eloquence of a lawyer, the impartiality of a judge, the decision of a general, the frankness of a witness, the astuteness of a man on trial for his life, with the precision of a mathematician, the imagination of an artist, the altruism of a philanthropist, and, in money matters, the tenacity of a pawn-broker.

While he tries to analyze the idiosyncrasies of the uneducated rich, who seem to be peculiarly liable to medical delusions, he is kept busy trying to keep the still-more-educated legislators from legislating him into the poorhouse. He must, perhaps, neglect the illness of some laborer who needs constant attention, in order to coddle some convalescent melancholic who never was sick. He gets to see his wife every Sunday morning—whether they need it or not.

Our cause is a noble one. If it were possible to picture, in one vast panorama, all the deeds of a single day of those who devote their lives to fighting disease, mankind would, I believe, be thrilled by an emotion far more enduring than that which responds to the battle of destruction.—Editorial in *Rhode Island Med. Journ.*, Oct., 1937.

The Seminar

"A Monthly Postgraduate Course"



(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Illinois.)



Problem No. 12 - 1937 (Medical)

Presented by R. Smith, M.D.,
Dundas, Ont., Can.

(See CLIN. MED. & SURG., Dec., 1937, p. 560)

RECAPITULATION: A girl of 18 years, 5 feet 4½ inches tall, and weighing 137 pounds, had vague abdominal pains, with low-grade fever, most of the time since four years old; severe acne since puberty, at 13 years; and constant fatigue and loss of interest in things since 1935, following measles and enteritis. An appendectomy in 1925 revealed enlarged, but non-tuberculous lymph glands.

This girl was of the bright and dynamic type before her more recent illness. She is now listless and fatigued. Her body build is stout, with massive limbs (complete measurements are given in the original problem); she is clumsy on her feet, and has a voracious appetite.

A rather complete clinical and laboratory examination revealed no abnormalities except a moderate, secondary anemia, and slight leukocytosis, with relative lymphocytosis.

Requirements: Suggest diagnosis and treatment, giving reasons. What, if any, information, other than that given in the original problem, would you require?

**Discussion by James H. Hutton,
M.D., F.A.C.P., Chicago, Ill.**

The mere statement that this girl's menstrual periods began at the age of 13 and have been "normal," is hardly sufficient in a case like this. We should know at what intervals they occur; their duration; whether the flow is scant or profuse; whether pain is present, and, if so, when it occurs (before, during, or after the flow);

whether there is any headache; whether the acne is worse at that time; and whether the temperature is higher or lower.

It would also be helpful if we knew more about the family history, particularly as regards the height and weight of the parents and siblings; and also the amount and distribution of the patient's hair suit.

A dextrose tolerance test should be made, and the amount of the blood calcium, cholesterol, and uric acid should be determined.

A low-grade fever, abdominal pain, and facial acne are sometimes seen in ovarian insufficiency, but such patients rarely have the heavy legs described in this girl.

**Discussion by John Clark, M.D.,
Independence, Kansas**

Doctor Smith does not leave much room for us to complain about the details of his examination. Everything is in good shape for us, except an x-ray study of the head.

This case looks like some form of obesity, and the measurements of her body confirm this impression. On the surface of things to be reconciled are the massive hips and thighs, with bodily fatigue and fever. Ordinary obesity does not give a picture like that. Below the surface are the mild leukocytosis and relative lymphocytosis, with a hemoglobin reading of 63 percent. Neither of these things is found in true obesity.

This condition could be myxedema. Doctor Smith does not tell us whether the fat is in the skin or under it, nor whether the skin is dry, the nails brittle, and the hair falling out. He does tell us that she is anemic, suffers fatigue, and is mentally depressed. Myxedema cannot be wholly banished from consideration, but we can be fairly certain that the thyroid gland is not seriously at fault here, because the Doctor informs us the basal metabolism is within normal limits.

Therefore we must look for a more plausible condition than myxedema.

There remains, then, a condition to be thought of that has, to date, received too scant attention—the state of the pituitary gland. Disorders of the pituitary can give a picture such as we have here and there may well be a tumor of this gland, possibly malignant. The patient is young, and the disease has been going on actively for two years at least; possibly since the age of four, when she had her earliest symptoms. There are no headaches. The eyes are not affected. These four things speak against a malignant condition. As a balance against them, she has difficulty in locomotion and is dull. These are slender leads, but malignancy is to be considered in all tumors of the pituitary gland. Further than this I have no means of knowing, without an operation, what manner of tumor this woman has.

She should have injection treatments of the pituitary gland—a *stable* preparation. My impression about the case is that medicine should have a clear field here. Surgery may be called for later, but it should be a last resort.

**Discussion by Maximilian Kern, M.D.,
Chicago, Illinois**

This patient does not present a clear-cut endocrine pattern into which this case might fit, and it is a far cry between recognizing a generalized "endocrine type" and a specific endocrinopathy, which is sometimes difficult to find. It is possible that there may be some parathyroid disturbance here, but our present knowledge and tests can give us little help in diagnosis.

Patients having a long-continued, low-grade fever, without any ascertainable cause, are most discouraging to treat. Two such patients have recently been referred to me because of an apparent endocrine dyscrasia.

No reference is made to blood cultures to determine the presence of septic endocarditis or rheumatic fever; nor do I find any reference to tests which would definitely exclude a low-grade tuberculous infection, except the statement that the mesenteric glands around the cecum were not tuberculous. I believe that these factors merit attention.

Problem No. 2 (Diagnostic)

Presented by W. E. McKinley, M.D.,
Jewell, Kans.

ON APRIL 20, 1936, Mr. M.C., age 43, married, 5 siblings, farmer, native of Kansas, went to town (a distance of four miles), remaining all the forenoon, and returned home, eating a hearty meal at noon, in his usual good health.

At 1:00 P. M. he voided easily and naturally. At 2:30 P. M. he was seized with a sharp, agonizing pain in the abdomen, and a physician was called at 2:45 P. M. When the physician arrived, the patient was in so much pain, and of an ugly, incorrigible temper, that he refused the physician a chance to make even a casual examination at that time. He frequently tried to void, with but little relief. A hypodermic injection of morphine, $\frac{1}{4}$ grain (16 mg.) and atropine, 1/120 grain (0.5 mg.) was given. The patient was covered with a clammy, sticky sweat, tossing in bed, and swearing like a trooper. Ten (10) grains (0.65 Gm.) of aspirin and 5 grains (0.32 Gm.) of amidopyrine, with a glass of hot water, was now given. A few minutes later he was somewhat relaxed and the pain somewhat relieved, but he was still getting up to void. At this time the physician was permitted to make a partial examination, finding the abdomen as hard as a board; temperature, 104.2° F.; pulse, difficult to count. The patient refused to go to a hospital.

At 4:00 P. M. another hypodermic injection of morphine and atropine, the same size as before, was given, with slight relief of pain, and the patient finally consented to go to a hospital, 32 miles distant. He arrived at the hospital in a moribund condition, pulseless, and breathing very rapidly; covered with a slimy, sticky sweat; eyes sunken. After saline solution and dextrose were given intravenously, the sweating stopped, the pulse revived, and his breathing was more easy.

He was placed on the operating table at 11:00 P. M. and operated upon, but died four hours later.

Requirement: Suggest the probable diagnosis, giving reasons.

INTROVERSION AND EXTROVERSION

Introversion is one of the most common diseases of the learned, and extroversion is the plague of the uninformed. To bind each action to an adequate reason, and to visualize each thought as manifesting in an appropriate consequence is to keep open and well regulated the course of energy in the human consciousness.—MANLY P. HALL, in "Questions and Answers."

Clinical Notes and Abstracts



Malinger^{*}

MALINGERING, especially in connection with claims for compensation, may often be very difficult to detect, but there are a number of tests which will give much help in that direction.

The tests for mental fatigue may bring out simulation. Thus, suppose the patient be given a number of simple calculations to do and is told to strike out the letter "s" wherever it occurs in a newspaper column. The real neurasthenic will start off with fairly good speed and accuracy, and after a few minutes begin making mistakes which increase in frequency as the test is prolonged. At the same time there may appear accessory evidence of fatigue: perspiration, tremor, tachycardia, and cerebral congestion. On the other hand the malingerer, suspecting that a faulty showing is expected of him, begins to make mistakes from the first, complaining that he "can't keep his mind on anything." The ergograph should be used also. In the healthy man the tracing is convex; in the neurasthenic straight for a time and then concave; in the hysteric concave. The malingerer, on the other hand, produces a curve with inexplicable contradictions.

Tremor is hard to imitate, and the fibrillary tremor of certain muscles impossible. A simulated tremor ceases when the patient's attention is distracted. In cases of contracture of the arm, cyanosis and atrophy, it must be remembered, do not exclude simulation, as these symptoms may be caused by bandaging and disuse. Have the patient stand for a few minutes, and if the leg on the same side becomes cyanosed and its foot colder than the other one, it speaks against simulation.

We sometimes see a patient complaining of headache, insomnia, and vertigo, with the idea doubtless that these are all symptoms whose nonexistence cannot be proved, but which at the same time furnish a fairly respectable nervous syndrome. Of the three named, headache is the hardest to disprove, but we should notice how the patient describes his headache voluntarily, without any leading questions.

^{*}*Med. Res.*, July 21, 1937.

The headache of the true neurasthenic is usually described as a feeling of pressure either from within or without the skull. They frequently state that their head feels "as if it would split," or as if there were a tumor growing in the brain. Furthermore, we often see, associated with the complaint of headache and tending to prove its authenticity, vasomotor disturbances such as marked flushing of the face and mucous membranes or alternate flushing and pallor.

Insomnia can hardly be present to any extent without evidence of deranged nutrition, even emaciation. If possible, as it is in military life, the patient should be placed in a hospital and watched carefully.

If the complaint of vertigo exists, the patient should not be let off with the statement that he has "dizzy spells," but should be required to describe exactly how they affect him. A characteristic description of the neurasthenic is that the floor seems to be giving way under him and that he is afraid. The malingerer, on the contrary, is apt to say that "everything seems going around," as he has heard that description given of vertigo. In this connection it should be mentioned that, in cases of head injuries, we should never neglect examination of the ear for signs of vestibular irritation.

A whole volume might be written about pain in the back, its etiology, treatment and simulation, but we must be content here to outline a few of the main points by which we detect the malingerer. Most fraudulent-minded persons are aware that it is a common symptom, easy to simulate and difficult to pronounce spurious. It must be borne in mind also that unqualified simulation is rare, the usual circumstances being the exaggeration of a slight disability into a serious one.

When the patient making such a complaint enters the room, we observe him narrowly. In real cases of severe lumbar pain the tendency is to immobilize that part of the body as much as possible; every movement is tentative and any position is shirked which would bring increased tension upon the implicated tissues. We should watch for these symptoms, the absence of one or

more of which points to simulation, or at least exaggeration: (1) rigidity of the back; (2) a cautious and groping walk; (3) bending forward with a list to one side; (4) sitting down gingerly and rising by supporting the thighs.

We then have the patient undress, noting whether or not he winces when movements calculated to provoke pain are made. Detection is something accomplished by directing the patient to allow his trousers to fall about his feet, under pretense of examining something about the groin. The doctor then turns away and tells the patient to come nearer. As he does so he instinctively stoops to pull up his trousers so they will not tangle his feet. Or when he is sitting upright in a chair we ask him to straighten his knees. The malingerer is not aware that to do this involves a strain on his dorsal muscles and fasciae and may do it without wincing.

Many other tests may be mentioned, and the ingenious physician will invent some for himself. In general we may say, however, that what we find in the malingerer is *inconsistency*. For example, if a movement causes pain, any other movement which involves that muscle will cause pain if that pain be genuine. The malingerer, unaware that two muscular movements, having nothing apparently in common, may involve the same muscle, states that one pains him and the other does not, thus exposing himself.

In regard to tenderness on pressure, the chief symptoms indicative of its real presence are swift withdrawal of the sensitive part when pressed, even when attention is distracted, and changes in the pulse rate, arterial tension, and the pupils.

The exaggeration of deep reflexes may be simulated, but the response, in the knee jerks for example, is likely to be delayed or to anticipate stimulation. Thus if the examiner makes a feint at tapping the tendon, stopping his hammer or hand abruptly before reaching it, there may be an exaggerated response. Or if he blindfold the patient, the latter, alertly anxious for the stimulation, may show a response with no stimulation or the response may be delayed. The facial expression of the true neurasthenic, or hysteric, is almost impossible to simulate.

True malingering, on no basis at all, is very rare, and exaggeration of actual symptoms very common, so that, in forming an estimate of the truth or falsity of the patient's ailments, we must take into consideration the *tout ensemble*, remembering that extremely bizarre syndromes may occur as the result of trauma, physical and psychic.

JOHN E. LIND, M.D.

Washington, D. C.

Benzedrine Sulfate in Narcolepsy*

SEVEN (7) OF 10 CASES of narcolepsy were complicated by cataplexy. All had complete or marked relief on administration of Benzedrine Sulfate (benzyl methyl carbinamine sulfate), in doses varying from 10 to 60 mg. a day, the average daily dose being 25 mg. In only one case was an apparent tolerance developed. Cataplectic symptoms were particularly benefited, and did not reappear even after withdrawal of therapy.

No evidence of permanent deleterious effects or habit formation was found. A slight rise in blood pressure and basal metabolic rate was produced in some instances, but these effects were transitory. Anorexia and momentary discomfort were prevented by reducing the dose or changing the time of administration.

Two patients who suffered from obesity had an 11-percent loss of weight with Benzedrine Sulfate, in doses of from 20 to 30 mg. a day. This effect was not observed in patients of normal weight.

Ephedrine was tried in three cases of narcolepsy, but was found to be of slight or no benefit. Dibenzyl carbinamine, given to four patients, failed to relieve narcoleptic symptoms and produced gastro-intestinal reactions, especially in large doses.

Benzedrine Sulfate provides the only satisfactory treatment for narcolepsy now available, but should invariably be used under the direction and control of a physician.

HELMUTH ULRICH, M.D.

Boston, Mass.

The Leukocytes in Infections and Injuries

IT IS FASCINATING to observe the white blood cells in infections or injuries. Recently opportunity has been given me to watch the cellular reactions in both of these conditions.

Late in September, on a visit to Philadelphia and Washington, I picked up all of the germs that are said to be responsible for coryza. On my return home about the first of October this coryza had extended to the bronchi, my sensations indicating that all of the smaller air passages were involved. The leukocyte count on October 2 was 13,000 per cubic millimeter. My technician gave me an intravenous injection of 1:200 hydrochloric acid (Loeser) with which 5 cubic centimeters of blood were withdrawn, so that the syringe contained 15 cc. of the acid and 5 cc. of blood. In one hour

*N. E. J. Med., 217:696, Oct. 28, 1937.

the count was 16,590. The next day the bronchitis was much improved and the count was 9,600, indicating that the white cells had done what they had to do, and no more.

On a Monday night a wrestler, Shinkoto, a Hawaiian Japanese, was to appear at a show. His specialty was said to lie in his power to put his opponents to sleep. I doubted his ability to do this. Dr. Cecil D. Gaston and I went to his dressing room, and on meeting Shinkoto I expressed my doubts concerning the pathologic phenomenon he was said to induce. He replied that he could really do it, adding that he would show me. Being much interested in knowing how it felt to die, I told him to put on the pressure. Standing behind me, with my head turned somewhat to the left, with his forearms about my neck, the pressure was put on slowly. The pain gradually became intense, and apparently when it reached its height, I lost consciousness. In seven seconds, Dr. Gaston said, there was then a marked convulsion, legs, arms, and body taking part. He also said that there had at first been a noticeable flushing of the face, followed by a deathly pallor and a risus sardonicus. In two minutes I awoke with a frightful pain in my left knee. I asked Shinkoto if this was an accompaniment of the phenomenon, but he said it was not. Anyway I had a most uncomfortable night with it and the next morning the knee was noticeably swollen, so that I got to the office with much pain and difficulty.

Here is something worth while for football medical attendants. The leukocyte count at nine o'clock was 13,000. My technician gave me exactly the same injection of blood and HCl for the swollen knee that had been given for acute bronchitis. The knee began to improve at once, in decreased pain and ease of getting about the office. At one o'clock the count was 16,000. The following morning there was only slight discomfort and the leukocyte count indicated that there was little more to do; it was 9,000 per cubic millimeter.

These observations indicate the truth of Metchnikoff's generalization, that "The one constant factor in immunity, whether innate or acquired, is phagocytosis."

I now know how it feels to die. It is easy and restful; there are no annoying thoughts; nothing in time past or fears for the future to give one worry, as one slips into unconsciousness as induced by Shinkoto. The blood supply to the brain is simply stopped by pressure on the carotids.

BURR FERGUSON, M.D.

Birmingham, Ala.

Modern Views on Scarlet Fever Prevention and Complications*

IN A STUDY of 783 cases of scarlet fever, occurring in Rockford, Illinois, school children, the following facts were shown: *No case developed in a child who had been immunized against scarlet fever (Dick method)*; 24 percent developed complications, of which otitis media was the most common immediate complication, and damage to the heart the most common permanent complication; most of the complications occurred in the younger age groups; the school with the highest percentage of immune children, had the lowest incidence of cases; 4 children and one school teacher died during the epidemic and another child died as a result of nephritis later on.

E. H. QUANDT, M.D.

Rockford, Ill.

[This is another proof that the Dick method of prevention is of the utmost value. Severe and even scurrilous criticism has been made of the method and its devisors.—ED.]

Recent Advances in Tuberculosis

THE TUBERCULIN TEST: At all ages, a negative Mantoux test may, for practical purposes, be considered as excluding tuberculous infection. In children the test is of great value; before the age of two years, a positive reaction is most probably associated with an active lesion (the younger the child, the greater the probability); in older children, while a positive test merely indicates infection, and therefore possibly only a healed focus, a negative test is of value in excluding infection. After infection, a period of a few weeks elapses before the test becomes positive—the ante-allergic period.

If no sputum can be obtained (especially in the case of children), the stomach should be washed, and the washings searched for bacilli by cultural and guinea-pig inoculation methods.

The x-rays have shown how entirely unreliable the physical findings are in tuberculosis. They will not indicate, however, if the lesions are active.

Rest is the most important single measure in treatment, with fresh air and diet assuming minor roles. Pneumothorax (artificial) is the most rapid method of rendering the patient noncontagious, as well as being the most effective in keeping him at his work.

*Ill. M. J., Oct., 1937

Prognosis is entirely unaffected by sex or age, except in children, and cannot as yet be scientifically determined.

The mortality in young children is still high; they should be removed from tuberculous homes at once, as tuberculous meningitis tends to develop in the first six months of exposure.

The tubercle bacillus is the cause of the common clinical forms of tuberculosis, but it constitutes only one biologic phase of the tubercle virus, which may show many forms, from filamentous organisms to particles which pass through coarse filters.—G. GREGORY KAYNE, M.D., M.R.C.P. (Lond.), D.P.H., in "The Control of Tuberculosis in England" (Oxford University Press).

Diagnosis and Treatment of Trigeminal Neuralgia and Meniere's Syndrome*

THERE ARE MANY KINDS of pain which occur in the face within the distribution of the fifth cranial nerve, but the term trifacial or trigeminal neuralgia is confined to that paroxysmal, lancinating, and at times prostrating pain with which most physicians are familiar. Its cause is as yet unknown, but its usual course is one of recurrent attacks, which may last from a few days to several months. During these attacks, the patient suffers from frequent paroxysms daily, the number varying from two or three to the point where they may come every few minutes, so that practically no respite is obtained. *Between attacks, which cease abruptly, there is entire freedom from pain.*

Treatment: When a patient comes for treatment for trigeminal neuralgia of the second or third divisions, an alcohol injection is the procedure of choice; first, because he can be given immediate relief; second, it demonstrates to the patient, for a temporary period, the minor discomfort of numbness which he must expect permanently after surgical division of the nerve root. For patients with a pure supra-orbital neuralgia, a simple supra-orbital neurectomy is advised, which involves only a few days in the hospital, and many times will give relief for from two to five years. Surgical division of two-thirds of the nerve root gives complete, permanent relief, with a mortality rate of one-half of one percent.

Meniere's Disease is characterized by sudden and severe vertigo, plus tinnitus and varying degrees of deafness in one ear.

Conservative treatment: A salt-free diet, together with large amounts of ammonium chloride (5 to 7½ grains—0.325 to 0.5 Gm.)

three times daily for three days; stopping for two days; and continuing in this way for several weeks, has been helpful. In many patients, the attacks have ceased abruptly and have not recurred for long periods.

Radical treatment: Dandy's intracranial section of the eighth nerve relieves the incapacitating vertigo.

GILBERT HORRAX, M.D.

Boston, Mass.

Zinc Fever

THOUGH ZINC FEVER is a transitory ailment, incomparably less serious than lead poisoning or silicosis, it is most unpleasant. The worker who has inhaled fumes of zinc oxide, while welding or performing any other operation in which the temperature of zinc is raised above its boiling point of 930° C., may experience no discomfort during working hours, but on returning home, he is overtaken by *rigors*, *fever* of 39° to 40° C. (102° to 104° F.) or more, and a sense of *lassitude*, *oppression in his chest*, an unpleasant sweet taste, and headache.

The only industrial remedy is mobile, forced-draught ventilation, which would enable the fumes of zinc oxide to be carried off as soon as generated at any particular spot.—DR. HAAKON NATVIG, in *Med. Rec.*, Oct. 20, 1937.

Modern Treatment of Undescended Testis*

HORMONAL TREATMENT (Antuitrin-S) results in enlargement of the inguinal canal and lengthening of the spermatic cord, increases the size and weight of the testis, and prepares the scrotum for its reception. It will fail in those cases in which definite scar tissue prevents the descent of the testis. Surgery often fails in those cases in which the cord is short.

The ideal procedure is to give injections of the gonadotropic hormone (0.4 to 1 cc. of a solution which is equivalent to 100 rat units to the cubic centimeter) on alternate days, for a period of one month. If the testis does not descend, the treatment may be repeated in two months. Approximately 50 percent of testes can be made to descend by this method, unless the individual is past the age of puberty. The preliminary injections, which are usually successful during the first month's treatment, are an aid to the surgeon in facilitating the operative procedure of transplanting the testicle. When much tension results on the cord, the hormone should be administered postoperatively.

*Rhode I. M. J., Oct., 1937.

*A. J. Surg., Oct., 1937.

I have never seen any unfavorable reaction or harm resulting from this treatment. Cabot states that the use of the gonadotropic principle may be dangerous in adults, and cites three cases in which death followed apparent allergic shock.

CLYDE L. DEMING, M.D.

New Haven, Conn.

The information you sent me was just what I needed. As I have only recently become a subscriber to *CLINICAL MEDICINE AND SURGERY*, I had no idea of the splendid service which you give your subscribers. I shall probably call upon you frequently.—H. H. S., M.D., Canada.

Streptococcic Meningitis

(Report of a Cured Case)

IN A CASE of streptococcic meningitis of at least two weeks' duration following mastoidectomy in a boy seven years old, the administration of Prontylin by mouth (5 grains every four hours) and of Prontosil intramuscularly (5 cc. every eight hours), over a period of days, had no effect upon the temperature, spinal fluid, or neurologic symptoms.

On the other hand, an 0.8 percent solution of sulfanilamide, given intraspinally two weeks after the onset of the meningitis, had a marked therapeutic effect. In three days the spinal fluid, which had been very turbid, became very clear; the spinal fluid cell count was reduced from 3,480 to 605 cells; and the results of culture of the spinal fluid changed from a profuse growth of hemolytic streptococci to no growth. The symptoms of cerebral irritation persisted long after the spinal fluid findings became negative.

The administration of large doses of sulfanilamide was followed by marked cyanosis of the nails and membranes and a dusky, bluish tinge of the skin. The cyanosis was more noticeable after subcutaneous or intramuscular injection than after oral administration of the drug. The urine showed an occasional and transient albuminuria and transient red blood cells, but never any casts. Thirty-four (34) urinalyses were made.

At the time of the patient's discharge, the leukocyte count was 5,600; the erythrocyte count, 2,800,000; and the hemoglobin, 50 percent. The lowest erythrocyte count noted was 2,640,000, and the lowest hemoglobin, 38 percent. These findings were present four days after four consecutive days of subcutaneous and intraspinally injections of sulfanilamide. Just before the sulfanilamide treatment, the erythrocyte count was 3,270,-

000; the leukocyte count, 12,800; and the hemoglobin, 56 percent.

After every large dose of sulfanilamide, a marked condition of somnolence and unresponsiveness was noted.

The mastoidectomy wound was practically free from purulent exudate two weeks after the administration of the sulfanilamide was begun, and was dry and healed when the patient was discharged from the hospital.

In spite of the patient's condition, an incision made for the purpose of blood transfusion was healed in four days.

So far as was known to us at the time, this was the first instance recorded of the intraspinal use of sulfanilamide in streptococcic infection of the central nervous system. Other cases of recovery from hemolytic streptococcus meningitis after the use of sulfanilamide intrathecally have been reported in the past few months. No case reported, however, had suffered from meningitis for more than seventy-two hours before the intraspinal treatment was instituted.

FRANKLIN J. CORPER, M.D.

W. J. NOONAN, M.D.

Ravenswood Hospital
Chicago, Ill.

Vitamin Therapy in Otolaryngologic Conditions*

FOUR FACTORS NOW ENCOURAGE the use of vitamins in otolaryngologic practice: (1) Sounder, better work by investigators; (2) the visual photometer test for vitamin A deficiency; (3) urinalysis and the capillary fragility test for vitamin C; and (4), to a lesser degree, the heart rate test for vitamin B.

Vitamin deficiencies are now established as contributory causative factors in respiratory infections, including those particularly of the nose, throat, and sinuses. Though vitamins must not be regarded as "cure-alls," nevertheless, they form a useful and necessary adjunct to other treatments and preventive measures. Bircher-Benner declares that neither prophylaxis nor therapeutics will be wholly successful if there is a vitamin deficiency.

Lowered resistance is probably due to deficiency of vitamins A and C. The former substitutes stratified, keratinizing epithelium for normal epithelium in the respiratory tract; and Mackie believes that infections of the eyes, tonsils, sinuses, buccal and lingual mucosa, and the skin, are due to lack of vitamin A.

Treatment: The nutritional type of corneal ulcers respond very well to vitamin

**Journal-Lancet*, Oct., 1937.

therapy. There is pain, scratching, and soreness of the eye, and small punctuate areas of ulceration are seen near the limbus. These coalesce after a few days, and corneal destruction progresses rapidly. Balanced combinations of vitamins, reinforced by additional vitamins A and B, stimulate healing, and ulceration ceases.

Congenital cataract likewise yields to vitamin treatment, if it is well fortified with vitamins A and C.

The convalescent period following severe, acute inflammation is shortened if vitamin therapy is used; while herpes zoster ophthalmia should be treated with vitamin B.

In sphenopalatine neurosis, the extreme pain and discomfort are speedily eased by the administration of vitamin B.

Acute sinusitis responds well to vitamin A, plus combined concentrates; but the vitamins merely augment the routine treatment. The period needed to establish immunity to the predominating organism in the infection is much shortened, allowing quicker surgical intervention with less danger of extension of infection. The healing period is surprisingly short. The vitamin A and concentrate must be given in large doses.

In general, vitamins may be regarded as food for the endocrines; as good preoperative strengtheners of systemic resistance; and as excellent curative agents in the conditions mentioned. Surgical intervention is, of course, resorted to where indicated.

G. M. KOEPCKE, M.D.

Minneapolis, Minn.

Tumors of the Testicle*

DUE TO THE INSIDIOUS, painless onset of a gradual enlargement of the testicle, teratoma testis is often not seen early enough for effective treatment. *Two-thirds of the patients referred to the Memorial Hospital, New York, had lost an average of six and one-half months as a result of incorrect diagnoses (gumma, tuberculoma, hydrocele, metastatic tumors).*

The enlargement of the testis usually progresses steadily, but it is not uncommon for the swelling to be interrupted by a period of quiescence, which may last for months and, rarely, for years. Then, for no reason, or possibly following trauma, a secondary and more rapid enlargement takes place. With the increased size, pain becomes noticeable. It is described as a feeling of weight or a sensation of dragging in the groin. Dull, aching pain in the lumbar region indicates the probability of metastasis retroperitoneally.

Diagnosis: The administration of iodides

and mercury will cause a rapid decrease in the size of a *gummatous* testicle *within one week*; *tuberculosis* of the testis is usually associated with slight fever and slight pain, a tendency to suppuration, nodular seminal vesicles, and a positive tuberculin test; *hydrocele* usually transmits light, and tapping the tunica vaginalis permits palpation; a *hematocele* following injury may become organized and form a hard mass.

Hormone Assay: Hormones are produced by the large majority of testicular tumors and appear in the urine; their assay is of great *diagnostic value* and, after treatment, of prognostic value.

Treatment: Orchidectomy, if the tumor is removed within six months of onset. Irradiation (x-rays or radium) is the treatment of choice, and is best given before simple orchidectomy, or the radical Hinman operation, or instead of it.

ELMER BELT, M.D.

Los Angeles, California.

Look for THE LEISURE HOUR among the advertising pages at the back.

A Negative Wassermann Test Is Not Diagnostic

MEDICAL INACCURACIES are noted in courtroom episodes because some physicians use the laboratory aid as a crutch, rather than as a cane, and believe that a few written words, "Spinal fluid Wassermann test negative," have more meaning than the finding of fixed or irregular pupils, mental confusion, a positive Romberg test, exaggerated reflexes, mumbling or inarticulate speech, poor coordination, et cetera.

In regard to the Argyll-Robertson pupil, it must be remembered that it may begin first in one eye and then in the other, or it may be reversed (failure of accommodation reaction, but not to light), or it may vary at different times, or there may be no reaction at any time, either to light or to accommodation. In neurosyphilis, there may be irregularity in the relationship of the size of the pupils, one to the other. The pupil may be "pin-point," with or without response to light and accommodation, with a peculiar expression ("batting") of the eyes, which is frequently found in general paresis. Any deviation of the pupil from normal should suggest syphilis, until proved otherwise.—E. W. WILLIAMS, M.D., and C. A. WRIGHT, M.D., in *Med. Rec.*, Oct. 20, 1937.

*A. J. Surg., Oct., 1937.

Diagnostic Pointers



Persistent Sore Throat

THE PATIENT WHO COMPLAINS of a *very severe sore throat lasting for several weeks*, may have secondary-stage syphilis. Mucous patches may be found anywhere—on the uvula, tongue, tonsils, and lips. Faint, whitish areas, irregular in outline, surrounded by a very narrow border of hyperemia, symmetrically placed (that is, if a patch is situated on one side of the uvula, a patch almost identical in size and shape will be found on the opposite side), may be considered mucous patches. If the patient is stripped and examined in a bright light, it is rare not to find a syphilitic erythema or papillide of the skin, or enlargement of the suboccipital or femoral lymph nodes. Persistent headache, rheumatic-like pains at night, and a slight rise in temperature may also be complained of.—C. G. COAKLEY, M.D., in "A Manual of Diseases of the Nose and Throat" (Lea & Febiger).

Undulant Fever, Influenza and Pneumonia

AN ACUTE ATTACK of fever, followed by weakness, exhaustion, anorexia, and incapacity for work for several weeks, may not be influenza, but rather undulant (Malta) fever. Chest roentgenograms show congestion and small pneumonic areas after the acute course has subsided, fibrosis will be seen on the plates.—R. H. LAFFERTY, M.D., in *South. M. J.*, June, 1937.

The Importance of Urinary Casts

LIFE INSURANCE STATISTICS indicate that casts, either hyaline or granular, and either intermittent or constant, herald the onset of heart and kidney disease about ten years before the cardiovascular-renal apparatus is seriously affected. Casts may be more easily found in the urine if a stain is added.

One drop of $\frac{1}{2}$ percent eosin in water solution is added to the slide and mixed by gentle shaking. Then two drops of a solution, obtained by the addition of 1.5 cc. of blue-black fountain pen ink to 10 cc. of saturated picric acid solution, are added. Cells

will be stained red and casts blue.—J. A. BEHRE, Ph.D., and W. MUHLBERG, M.D., in *J. Lab. & Clin. Med.*, May, 1937.

Vitamin A Deficiency

IN A SPECIAL STUDY of 100 medical students, 20 percent were found, by photometric tests, to be suffering from vitamin A deficiency. These persons showed improvement after taking vitamin A concentrates for periods of from two weeks to four months.—HAROLD J. JEGHERS, Boston, Mass.

Why Is a Patient Anemic?

IT IS NOT ENOUGH to find a lowered hemoglobin and/or red-cell count, and institute iron or liver treatment. Secondary anemias are *secondary to what condition?*—Bleeding hemorrhoids, or peptic ulcers, or intestinal carcinomas; worms; chronic nephritis; acute or chronic infections (syphilis, tuberculosis) and overdosage with medicine (iodides, antipyrin, mercury, salicylates)?—H. W. MURRAY, M.D., in "Symptomatic Diagnosis" (Mosby).

Pathognomonic Evidence of Heart Disease

- 1.—The characteristic pain of angina pectoris, even if no signs are present.
- 2.—Persistently elevated blood pressure.
- 3.—Enlargement of the heart or aorta.
- 4.—Arteriosclerosis, generalized or of the aorta and coronary vessels only.
- 5.—Persistent fast pulse of auricular flutter (140 to 180); persistent slow pulse of complete heart block (35 to 40); complete absence of heart sounds during two cycles (partial heart block; premature beats can be heard); entire irregularity of heart beat, occurring with auricular fibrillation; alternating weak and strong beats of pulsus alternans, detected while taking systolic pressure.
- 6.—Persistent, conspicuous gallop rhythm ("tic-tac" or fetal heart sounds).
- 7.—Diastolic murmurs and thrills; systolic murmurs are important only if other causes (anemia, fever, etc.) are excluded.—G. R. HERRMANN, M.D., in "Diseases of the Heart and Arteries" (C. V. Mosby).



THE DOCTOR'S STUDY

That is a good book which is opened with expectation and closed with profit.—ALCOTT.

Alexander: Collapse Therapy

THE COLLAPSE THERAPY OF PULMONARY TUBERCULOSIS. By John Alexander, B.S., M.A., M.D., F.A.C.S., Professor of Surgery, University of Michigan; Surgeon-in-Charge, Division of Thoracic Surgery, Department of Surgery, University of Michigan; with Chapters by Max Pinner, M.D., F.A.C.P., Herman M. Biggs Memorial Hospital, Ithaca, N. Y.; John Blair Barnwell, B.A., M.D., Associate Professor of Medicine, University of Michigan, and Physician-in-Charge, The Tuberculosis Unit, Department of Internal Medicine, University of Michigan Hospital; and Kirby Smith Howlett, Jr., M.S., M.D., Resident, Laurel Heights State Tuberculosis Sanatorium, Shelton, Conn. Springfield, Illinois, and Baltimore, Maryland: Charles C Thomas. 1937. Price, \$15.00.

This monograph has been written for the internist and the surgeon and much attention has been given to the proper selection of patients for collapse therapy, as well as to operative technic and preoperative and postoperative management.

Chapters on the results of sanatorium therapy, with and without collapse therapy, and on the evolution of surgical therapy of tuberculosis are followed by the chapters by Max Pinner on the physiology and pathology of collapse therapy. Then there are discussed the choice of operations, bilateral collapse therapy, phrenic nerve paralysis, scalenectomy and scalenotomy. John Blair Barnwell next takes up the subject of pneumothorax in considerable detail. The succeeding chapters are on closed intrapleural pneumonolysis, open intrapleural pneumonolysis, oleothorax (by Kirby Smith Howlett, Jr.), multiple intercostal nerve paralysis, extrapleural pneumonolysis, suprapariosteal

and subcostal pneumonolysis, thoracoplasty, surgical drainage of a pulmonary cavity, the treatment of tuberculous empyema, and of tuberculosis of the thoracic wall. There is an excellent bibliography.

Barnwell warns that possible danger of over-enthusiasm for pneumothorax exists; that there is the danger of an attempt to substitute pneumothorax for all rest and sanatorium treatment; and that there is a growing menace in the attempt of untrained persons to carry out the complete treatment in the home or office. Yet, Alexander concludes that, although sanatorium treatment is indispensable, its results may be shockingly bad in far-advanced and in certain types of moderately-advanced pulmonary tuberculosis, if not combined with some type of collapse therapy.

Though such statements are made, the reviewer gets the impression that collapse therapy appears to be the treatment of choice in almost every case of pulmonary tuberculosis.

Much attention is given to the selection of patients for the various operations; little, to the selection of patients for purely medical management. Collapse therapy of the type suited to the particular case, would seem to have almost superseded all other types of therapy. Medical management would seem to have become an aid to surgical treatment. While this attitude may prove to be correct, it is now over-enthusiastic. Medical management is still the method of choice in the treatment of most cases of pulmonary tuberculosis, at least in the earlier stages of the disease. Collapse therapy, of the types described so well by the authors, is becoming increasingly valuable, especially in the more advanced stages of the disease and as a means of shortening the contagious period in those who can ill afford the prolonged medical management so often required. Time in which to evalu-

New Books

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Waukegan, Ill., is accompanied by a check for the published price of the book.

ate the results of collapse therapy in thousands instead of in hundreds of cases, will be required before this question can be definitely answered.

This book should be studied carefully by all interested in the problem of the treatment of pulmonary tuberculosis; by the internist, to help him determine the type of therapy to be used; by the thoracic surgeon, to acquaint him with technic, pre- and post-operative management, and to help him in the selection of the type of collapse therapy to be used in a particular case.

N.S.D.

Smith: Orthopedic Surgery

ELEMENTS OF ORTHOPAEDIC SURGERY. By N. Ross Smith, M.B., Ch.M. (Sydney), F.R.C.S. (Eng.), Orthopedic Surgeon, Cornelia Hospital, Poole; Formerly Surgical Registrar, West London Hospital; Surgical Registrar and Senior House Surgeon, Royal National Orthopedic Hospital, London; Demonstrator in Anatomy, University of Sydney, Australia. With 99 Illustrations. Baltimore: William Wood and Company. 1937. Price, \$4.00.

Into the field of orthopedics and crippled children's work, a number of related fields are closely interlocked, such as public health nursing, crippled children's clinics and hospitals, and parents or relatives of patients presenting orthopedic problems. This branch of surgery demands long-continued cooperation and care, over a period of years. To obtain this cooperation, it is essential that those concerned realize the magnitude of and the difficulties inherent in reconstructive work.

This small volume is written with the idea of informing those with no orthopedic training as to the nature of the common lesions, especially congenital dislocation of the hip and club foot, and the care necessary for their cure.

A number of well-chosen clinical photographs and reproductions of roentgenograms illustrate salient points.

Martin: Dextrose in Everyday Practice

DEXTROSE THERAPY IN EVERYDAY PRACTICE. By E. Martin, Sc.D., New York. With forewords by W. N. Haworth, F.R.S., Director of Chemistry Department, University of Birmingham (England), and Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois, College of Medicine. 44 Illustrations, 15 Full-page Plates. New York: Paul B. Hoeber, Inc. (Medical Department of Harper & Brothers). 1937. Price, \$3.00.

This book is all that its title claims, and more. For those of us who have been using "glucose" more or less empirically, it is gratifying to read of the laboratory and clinical work that has been carried out on dextrose in the years 1900 to 1936, and to

find that others have had the same results in practice.

As Dr. Fantus states in his foreword, the 2,000 papers listed at the end of their respective chapters is a sufficient reason for the book's publication. The meat of each article is worked into a readable, rapid-fire account of the chemistry and physiologic action of dextrose, its use in alimentary disturbances, deficiency diseases, metabolic disorders, diseases of allergy, infectious diseases, cardiac and circulatory disturbances, genito-urinary diseases, nervous system diseases, disorders of pregnancy, and in surgery. There is a very complete, detailed chapter on the various modes of administration (subcutaneous, intramuscular, continuous and intermittent intravenous, rectally, orally, etc.). Full page lithographed illustrations display the various modes of administration and clinical end-results.

Hall: Diseases of Nose, Throat, and Ear

DISEASES OF THE NOSE, THROAT, AND EAR. By I. Simpson Hall, M.B., Ch.B., F.R.C.P.E., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh (Department for Diseases of Nose, Throat and Ear); Lecturer in Diseases of Nose, Throat and Ear, University of Edinburgh. Baltimore: Wm. Wood & Co. 1937. Price, \$4.00.

This small volume does not appear prepossessing until it is carefully studied. Then the careful attention to details, the exact instructions on technic, the clear, brief descriptions of symptoms and treatment, are fully appreciated. For brevity and practicability, the reader is referred to the section on tonsillectomy under local anesthesia. That on boils in the external auditory canal is equally basic, equally informative. If the reviewer had known of the 8-percent aluminum acetate solution for packing a tightly swollen and infected ear canal (not mentioned in several large texts), he would have spared one patient much discomfort.

For the medical student who meets affections of the ear, nose, and throat in the dispensary, with but little theoretical preparation, such a small, handy text is invaluable. The general practitioner, and even the specialist, will find words of wisdom worth cherishing.

Burn: Biological Standardization

BIOLOGICAL STANDARDIZATION. By J. H. Burn, M.D., Professor of Pharmacology at the College of the Pharmaceutical Society, London University, London, England. London: Oxford University Press. 1937. Price, \$7.50.

Those who have wondered about the *modus operandi* of modern pharmacology and standardization of drugs will be fasci-

nated by this book. A failure of proper standardization means that patients will receive an overdose or an inefficient dose of some biological preparation, or even a product that will not be effective for the condition treated.

For example, androsterone was first thought to be the *male sex hormone*; by careful animal experimentation and analysis of prostatic and seminal vesicle growth changes after administration of androsterone and testosterone propionate (androsterone is the urinary extraction product, while testosterone is the extract of testicle), it was found that their actions were different.

Methods are presented for measuring, physiologically, the gonadotropic, growth, lactation, and thyrotropic hormones of the anterior pituitary, which will ensure the therapy of tomorrow; posterior lobe extract, insulin, suprarenal gland hormones, thyroid extract, parathyroid extract, ovarian hormones, the four standardized vitamins, digitalis and its preparations, organic arsenic and antimony compounds, and antimalarial substances are considered in separate chapters.

Professor Burn's pertinent statements in regard to the fallacy of "cat units" or "mouse units" are much to the point in these days of superadvertising. He demonstrates that these units vary from laboratory to laboratory, from animal to animal, and even from season to season.

Ormsby:

Diseases of the Skin

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. For the Use of Students and Practitioners. By Oliver S. Ormsby, M.D., Clinical Professor and Chairman of the Department of Dermatology, Rush Medical College of the University of Chicago; Dermatologist to The Presbyterian and Saint Anthony's Hospitals, and the Home for Destitute Crippled Children; Consulting Dermatologist to the Orphan Asylum of the City of Chicago, etc.; with Revision of Histopathology and Mycology by Clark W. Finnerud, B.S., M.D., Assistant Clinical Professor of Dermatology, Rush Medical College of the University of Chicago; Assistant Attending Dermatologist to the Presbyterian Hospital of Chicago, etc. Philadelphia: Lea & Febiger. 5th Edition. 658 Engravings; 1334 Pages. 1937. Price, \$12.00.

This, the new edition of Dr. Ormsby's dermatologic "bible," is again revised to bring in the most recent advances, yet without enlarging the book beyond its already massive size. The histopathologic slides are well reproduced and appropriate comments are at hand. As the dermatologist turns pathologist to substantiate his diagnoses and to explain their clinical features, so must his knowledge expand into the three dimensions.

Practicality is not lost sight of either in diagnosis or treatment, as shown in the section

on corns and callosities and that on syphilis.

The general practitioner, when confronted with a book of some 1300 pages, which covers every dermatologic disease known today, feels a certain helplessness. How is he to find the name of an unusual skin lesion, and thus have the key to unlock this vast mountain of references? Dr. Ormsby, in a few masterly pages, gives hints as to the diagnosis of dermatologic conditions by distribution of eruption, color, configuration, and the lesions themselves. The basic elements of any skin disease; i.e., macules, papules, etc., are considered under general symptomatology, and here again are suggested some of the causative conditions.

If any suggestions might be made apropos such an excellent work, it would be that a classification be attached so that the practitioner can readily trace down the disease from its one or more prominent signs or symptoms.

Butterfield: Art of Love

SEX LIFE IN MARRIAGE. By Oliver Butterfield, M.D., former staff member, Teachers College, Columbia University. Foreword by Sophia J. Kleegman, M.D., F.A.C.S., Asst. Clin. Professor, Obstetrics and Gynecology, N. Y. Univ. College of Medicine. New York City: Emerson Books, Inc. 1937. Price, \$2.00.

Physicians in clinical practice need no lengthy argument to convince them that a large proportion of married people are woefully ignorant of sex technique, or the art of love, and that this ignorance is at the root of much marital infelicity.

Here is another of the books which fortunately, have of late been appearing to furnish information on this highly important subject. While not so detailed and extensive as some of those which are now available, it sets forth the elementary facts and suggestions which are required by those who have had little or no instruction along these lines, in a way that can be readily assimilated by persons of average intelligence, and should prove adequate to the needs of many, and a satisfactory introduction to the more elaborate works, for those who desire more light on this vital subject.

Physicians can safely and profitably recommend this little book to any of their patients and friends who are newly married or about to be married, and even to many of the older couples whose sex life is not so satisfactory as it should be.

Shearer: Manual of Human Dissection

A MANUAL OF HUMAN DISSECTION. By Edwin M. Shearer, Ph.D., Associate Professor of Anatomy, New York University College of Medicine. Philadelphia: P. Blakiston's Son & Co., Inc. 1937. Price, \$4.25.

The cover of this new volume is sturdy, cleanable, water-resistant, and vermin-

proof. The technic of dissection is described in detail, and in step-by-step order. Pen and ink sketches by the author illustrate the more common areas of regional anatomy. There are 79 such sketches.

This is a very handy book to have at the dissecting table, although some colored illustrations might demonstrate the various arteries, nerves, veins, and muscles more readily and clearly, especially to the novice.

A very interesting digression is the discussion on the use of the regional (or sectional) method of dissection. As the author comments, "The dissector may never see the entire arterial system, or entire nervous system, at one time." This criticism is very much to the point, as the student may easily lose sight of the essential unity of the body.

Gould: Medical Dictionary

GOULD'S MEDICAL DICTIONARY. The Words and Phrases Generally Used in Medicine and the Allied Sciences, with Their Pronunciation and Derivation. By George M. Gould, A.M., M.D., author of "An Illustrated Dictionary of Medicine Biology, and Allied Sciences." Edited by R. J. E. Scott, M.A., B.C.L., M.D., and C. V. Brownlow. Fourth Revised Edition. With Illustrations and One Hundred and Seventy-four Tables Including New Tables of Prefixes and Suffixes; the Tables of Bacteria,

Metazoa and Protozoa Pathogenic to Man and Animals, by D. H. Bergey, M.D., Late Professor of Hygiene and Bacteriology, University of Pennsylvania. Philadelphia: P. Blakiston's Son and Co., Inc. Price, \$7.00 plain, \$7.50 with thumb index.

Gould's Medical Dictionary is one of the old standbys of many medical libraries, and the fact that one has an earlier copy is no reason why one does not need a newer edition, because the vocabulary of medicine and its allied sciences is increasing with great rapidity.

The present (fourth) edition contains a large number of new words, and many of the older definitions have been corrected to fit modern conceptions. Skillful condensation and resetting of type have, however, made room for these new inclusions without materially increasing the size of the volume. The system for indicating pronunciation is especially simple and satisfactory, and the large number of tables (including several new ones) is very helpful for quick reference. One could wish that the boldface type used for the key-words had been a little larger, as these do not stand out quite so clearly as is desirable. The illustrations are relatively few.

This lexicon is a sound and worthy piece of work, and the physician or other scientist who uses it can be sure that his information is as nearly up to date as is practicable.

New Books Received

The following books have been received in this office and will be reviewed in our pages as rapidly as possible.

DISEASES OF THE SKIN. A Manual for Students and Practitioners. By the Late Robert W. MacKenna, M.A., M.D., Ch.B. (Edin.) 4th Edition, Revised and Enlarged by Robert M. B. MacKenna, M.A., M.D. (Camb.), M.R.C.P. (Lond.) Baltimore: William Wood & Company. 1937. Price, \$7.00.

THE HAIR AND SCALP. A Clinical Study. (With a Chapter on Hirsuties). By Agnes Savill, M.A., M.D. (Glasg.), M.R.C.P.I. 2nd Edition. Baltimore: William Wood & Company. 1937. Price, \$4.75.

FEVER THERAPY. Abstracts and Discussions of Papers Presented at the First International Conference on Fever Therapy. College of Physicians and Surgeons, Columbia University, New York City. New York: Paul B. Hoeber, Inc. 1937. Price, \$5.00.

MEDICO-LEGAL ASPECTS OF THE RUXTON CASE. By John Glaister, M.D., S.Sc., Barrister-at-Law, and James Couper Brash, M.A., M.D., F.R.C.S. Ed. Baltimore: William Wood & Company. 1937. Price, \$6.00.

WHEELER AND JACK'S HANDBOOK OF MEDICINE. Revised by John Henderson, M.D., F.R.F.P.S. (Glas.) 10th Edition. Baltimore: William Wood & Company. 1937. Price, \$4.00.

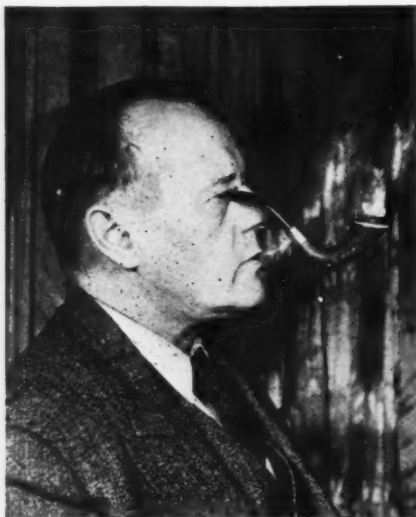
SURGICAL DISEASES OF THE MOUTH AND JAWS. By Earl Calvin Padgett, B.S., M.D., F.A.C.S. Philadelphia and London: W. B. Saunders Company. 1938. Price, \$10.00.

ARCHIV FÜR KREISLAUFLOR-SCHUNG. Edited by Dr. E. B. Koch and Dr. E. D. Stadler. Volume 1, Numbers 9-12, November, 1937. Dresden and Leipzig: Theodor Steinkopff. 1937. Price, RM 2.—.

DER RHEUMATISMUS SERIES. Volume 1, Übungstherapie bei rheumatischen Erkrankungen. By Dr. P. Kohler. Volume 2, Anleitung zur klinischen Analyse des infektiösen Rheumatismus. By Prof. Dr. med. A. Slauck. Dresden and Leipzig: Theodor Steinkopff. 1938. Price, RM 5.—, each.

DEMONSTRATIONS OF PHYSICAL SIGNS IN CLINICAL SURGERY. By Hamilton Bailey, F.R.C.S. (Eng.) 6th Edition, Revised. Baltimore: William Wood & Company. 1937. Price, \$6.50.

Medical News



Photography by Andre La Terza, New York

Smoke in His Eye

SO FAR AS IS KNOWN TO MEDICAL SCIENCE, Alfred Langevin, a French-Canadian, is the only man in the world who can breathe and smoke through his eye. With his nose and mouth tightly closed, he can exhale and inhale through an anomalously patent nasal duct on the right side; and by means of a special apparatus, having a tube which passes down through this duct, with a nose-clip to hold it in place, he smokes cigars, cigarettes, or a pipe.

The picture above shows Mr. Langevin smoking a calabash pipe in this astonishing manner, and illustrates the strength of the ingenious nose-clip which holds the apparatus in place. Strong tobacco causes no irritation of the eye.

International Leprosy Conference

THE FOURTH INTERNATIONAL LEPROSY CONFERENCE is to be held at Cairo, Egypt, March 21 to 31, inclusive, 1938. The Egyptian Government is inviting all countries

concerned to send official delegates and all physicians and other interested persons will be cordially welcomed. For full particulars, write to the Secretary, International Leprosy Association, 131 Baker St., London, W. 1., England.

Dr. Hektoen Heads Cancer Institute

DR. LUDWIG HEKTOEN, of Chicago, nationally known pathologist, has been appointed executive director of the National Advisory Cancer Council, which, with the Surgeon General, U. S. Public Health Service as ex-officio chairman, will direct the activities of the new National Cancer Institute, for which Congress has recently appropriated \$750,000 for buildings and equipment, and \$700,000 a year for research.

Physicians' Art Exhibition

THE AMERICAN PHYSICIANS' ART ASSOCIATION, a national organization of medical men who have ability in the fine arts, will hold its first national exhibition in San Francisco, Calif., in June, 1938, during which month the A.M.A. will meet in that city. The arts to be represented are: painting in oils and watercolors, sculpture, photography, pastels, etching, crayon and pen and ink drawings, wood carving, and book binding. Scientific medical art work will not be accepted. Entries close April 1, 1938. Interested physicians should write to the Secretary of the Association, Suite 521-536, Flood Bldg., San Francisco, Calif., for further information.

A New Waterproof Sheet

A NEW TYPE OF HOSPITAL SHEETING, made from "Cavalite" rubber-coated silk, has been developed in the laboratories of the du Pont Company.

Extremely light in weight and of smooth-texture, it has been designed to fit snugly to the mattress, and, when covered with the bed sheet, its presence cannot be felt by the patient.

A series of tests, reproducing every condition of rigorous hospital use, has proved its durability. It is completely waterproof.



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- 4 Taurocol. The Paul Plessner Co.
- 5 Specific Urethritis—Gonosan "Riedel." Riedel & Co., Inc.
- 6 Dr. Weirick's Sanitarium. Dr. G. A. Weirick.
- 8 *Journal of Intravenous Therapy.* Loeser Laboratory.
- 9 Elixir Bromaurate in the Treatment of Whooping Cough and other Cough Disorders. Report of Cases. (Booklet.) Gold Pharmacal Co.
- 10 Menocrin. The Harrower Lab., Inc.
- 12 Endothylin for use in Hypothyroidism, etc. The Harrower Lab., Inc.
- 13 A Few Notes Regarding Psychoanalysis. Fellows Medical Mfg. Co.
- 15 Cough—Its Symptomatic Treatment. Martin H. Smith Co.
- 16 The Therapeutic Value of Chemical Foods. Fellows Medical Mfg. Co.
- 17 Feeding Diabetic Patients. Knox Gelatine Labs.
- 19 Menstrual Regulation by Symptomatic Treatment. Martin H. Smith Co.
- 20 Hyperol. A Utero-Ovarian Tonic and Corrective. Purdue Frederick Co.
- 21 Gray's Glycerine Tonic Comp. Purdue Frederick Co.
- 22 Feeding Sick Patients. Knox Gelatine Labs.
- 23 Danish Ointment. Reprint *J. A. M. A.* Acne Rosacea. The Original 24-Hour Treatment for Scabies. The Tilden Co.
- 25 Clinical Guide for Female Sex Hormone Therapy. Schering Corp.
- 26 Gastric Mucin; An Outstanding Advance in Ulcer Therapy. The Wilson Labs.
- 27 Reducing Diets and Recipes. Knox Gelatine Laboratories.
- 29 Colloidal Mercury Sulphide-Hille. Hille Laboratories.
- 30 Ludozan—The Longer Lasting Antacid. Schering Corporation.
- 31 Laboratory Tests to Determine the Germicidal Efficiency of the Vapors from the Cresols of Coal Tar. Vapo-Cresolene Co.
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- 43 Karo Syrup for Infant Feeding. Corn Products Sales Co.
- 44 Appliances for the Mechanical Retention of Hernia. Brooks Appliance Co.
- 50 Gestasol. The Follicular and Luteinizing Fractions obtained from Human Placentas. The National Drug Co.
- 51 Formaldehyde for Urinary Antisepsis. Schering & Glatz, Inc.
- 54 Use of Zinc Borate in Otolaryngology. Hille Laboratories.
- 55 Prontosil (in ampules for injection) and Prontylin (in tablets for oral use)—Chemotherapy of Streptococcus, Meningococcus, and Urinary Infections. Winthrop Chemical Co., Inc.

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- 61 Body Chemistry as Related to the Endocrine Glands. Reed & Carnrick.
- 62 Bismuth Subsalicylate in the Treatment of Syphilis. Loeser Lab.
- 63 Nephritin—The Standard Treatment for Kidney Disorders. Reed & Carnrick.
- 68 The Principles of Allergy with Special Reference to Asthma and Hay Fever. The Arlington Chemical Company.
- 71 Eucupin Ointment, a Bactericidal Local Anesthetic of Sustained Action. Rare Chemicals, Inc.
- 72 Lupex Capsules for Relief of the Functional Pains of Menstruation and Primary Dysmenorrhea. The Lupex Co., Inc.
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- 84 The Three Arsenicals in General Practice. Mallinckrodt Chemical Works.
- 89 Free Iodine as a Therapeutic Agent. Burnham Soluble Iodine Co.
- 91 Adrenal Cortex; for the Treatment of Addison's Disease and Asthenia. The Wilson Labs.
- 94 Haimased for Hypertension. The Tilden Co.
- 95 Low Cholesterol, Low Fat, Low Caloric Diet List for Distribution to Patients. Burnham Soluble Iodine Co.
- 96 Eburol, a Healing Ointment for Burns, Wounds and Ulcers. Ernst Bischoff Co.
- 97 Reprint, "Dysmenorrhea: A New and Effective Treatment." The Lupex Co.
- 99 A Survey in Two Fields of Medicine. A. C. Barnes Co.
- 100 Neo-Plasmoid. The Modern Solution For the Injection Treatment of Hernia. Farnsworth Labs.
- 103 Sarapin. A New Product. High Chemical Co.
- 105 Ovoiderrin. Iron in its Most Efficient Subdivision. A. C. Barnes Co.
- 107 Merythrol. A New Mercurial Germicide. Chemico Labs.
- 110 Parenteral Calcium Therapy—A Review of the Literature with Comprehensive Bibliography. Loeser Lab.
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- 113 Abbott's Iberin. Abbott Laboratories.
- 116 Alparene—An Effective Sclerosing Solution for the Injection Treatment of Hernia. Dequin Physicians' Products Co.
- 117 Estrone and Estriol. Abbott Labs.
- 118 For the Control of Hemorrhage. Congo Red in the Treatment of Pulmonary, Gastrointestinal, and Genito-urinary Hemorrhage. Associated Physicians' Labs.
- 122 Entromone Tablets. Endo Products, Inc.
- 123 Resumé of Venereal Therapy. Mallinckrodt Chemical Works.
- 124 Soricin in the Treatment of Intestinal Toxemia. The Wm. S. Merrell Company.
- 125 Parenteral Therapy of Strontium. Loeser Laboratory.
- 126 Subenon—Anti-arthritis and Anti-rheumatic. Seydel Chemical Co.
- 127 The Last 4 Inches. Schering & Glatz, Inc.
- 128 Woman and Acidosis. Wm. R. Warner & Co., Inc.
- 129 Ileo-Cecal Stasis. Wm. R. Warner & Co., Inc.

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